

PSYCHOLOGICAL ABSTRACTS

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GENERAL

3056. Ballard, P. B. Sir John Adams. *Brit. J. educ. Psychol.*, 1935, 5, 1-9.—An appreciation of Sir John Adams as a leader in British education and in the field of applied psychology.—K. M. Cowdery (Stanford).

3057. Bauer, O. Zwei neue geistige Sinne und Physiologisches des geistigen Gefühls. *Neue Psychologie des geistigen Gefühls*. (Two new psychic senses and the physiology of psychic feelings. New physiology of psychic feelings.) Altona, Elbe: Author, 1934. Pp. 77. RM. 1.50.—R. R. Willoughby (Clark).

3058. Cohen, J. J. Studies in psychophysics. London: Bale & Danielsson, 1935. Pp. 194. 5/—Discusses psychophysical origins, psychophysical values, the actual universe, and the metaphysics of latent space.—F. C. Bartlett (Cambridge, England).

3059. Cunningham, G. W. Perspective and context in the meaning-situation. *Univ. Calif. Publ. Phil.*, 1935, 16, No. 2. Pp. 23.—R. R. Willoughby (Clark).

3060. Darrow, C. W. A "wet and dry" thermopile for recording perspiration. *J. gen. Psychol.*, 1934, 11, 448-450.—This device consists of a pump for drawing air at a constant negative pressure from the skin surface first over the junctions on one side of a compound thermocouple, and then back along the junctions on the other side.—H. Cason (Wisconsin).

3061. Darrow, C. W. Calibration for a recorder of perspiration. *J. gen. Psychol.*, 1934, 11, 450-451.—Methods are described for quantitatively calibrating the apparatus used in the measurement of perspiration from small areas of the skin.—H. Cason (Wisconsin).

3062. Darrow, C. W. An efficient photo-recording galvanometer. *J. gen. Psychol.*, 1934, 11, 452-453.—A relatively low-priced, highly sensitive, quick-acting galvanometer for photographic recording of the galvanic skin reflex, sweat, and other relatively slow physiological changes may be readily constructed from a small two-inch microammeter.—H. Cason (Wisconsin).

3063. Dunlap, K. The average animal. *J. comp. Psychol.*, 1935, 19, 1-3.—It is suggested that authors should present sufficient data in their articles to enable others to analyze them. Group averages alone are not sufficient. Other suggestions concerning an adequate number of animals, the amount of space to be devoted to historical introduction, and the space devoted to opinions, ideas, and inferences are offered.—N. L. Munn (Pittsburgh).

3064. Dupréel, E. Nature psychologique et convention. (Psychological nature and convention.)

J. Psychol. norm. path., 1934, 31, 657-679.—One's aim is to discover in fields other than sociology, of which psychology is the chief, the various kinds of convention. Anything that is agreed upon may be regarded as a new reality. Convention is really a focusing of certain activities where phenomenal connections are combined. Antecedent and consequent terms and forces are involved in this process. Something entirely new and unitary emanates. There is also involved a confirmation and combining of certain processes throughout the psychological domain. Especially is this so in the case of memory, anticipation and perception. This articulation among phenomena is not necessarily to be interpreted as implying direct causality, but as an application of the laws of probability. Scientific advance in knowledge of reality depends upon knowing what factors determine that such and such an event is more probable than improbable.—P. S. de Q. Cabot (Harvard).

3065. Flugel, J. C. Men and their motives. London: Kegan Paul, 1934. Pp. v + 289. 10/6.—Eight essays, six of them reprinted from periodicals, dealing with: the psychology of birth control; sexual and social sentiments; some problems of jealousy; Maurice Bedel's "Jerome": a study of contrasting types; Esperanto and the international language; the significance of names; some psychological aspects of a fox-hunting rite; and the character and married life of Henry VIII. The sixth and seventh essays are by Ingeborg Flugel. All of the studies are written from the psychoanalytical point of view.—F. C. Bartlett (Cambridge, England).

3066. Gardner, W. A new apparatus for cinematography in pupillary reflex studies. *Proc. Ia Acad. Sci.*, 1933, 40, 194.—In conjunction with a telescopic cine-kodak two lights were used, one a white light for a light stimulus and the other a purple-violet for photography. Both lights were controlled by rheostats to give certain intensities determined by a photometer. The technique may be used to isolate both the sphincter and dilator reflexes.—B. Wellman (Iowa).

3067. Garnett, A. C. A theory of the nature and criteria of truth. *Aust. J. Psychol. Phil.*, 1935, 13, 66-81.—H. D. Spoerl (Boston).

3068. Giese, F. *Psychologisches Wörterbuch*. (Psychological dictionary.) (3rd ed.) Halle: Marhold, 1935. Pp. 208. RM. 4.60.—R. R. Willoughby (Clark).

3069. Harms, E. Die psychologische Bedeutung des Tagesbuches. (The psychological significance of diaries.) *Psyche, Schweiz.*, 1934, No. 9.—The author discusses the significance of diary notes for the study of "Seelenleben." Material of this kind yields two

kinds of research material: (1) There are very essential psychic experiences which escape other possibilities of being apprehended due to the fact that they are unexpressible. Such experiences nevertheless lend themselves to writing in such a way that the psychic processes active in them can be understood. (2) There is a great number of psychic events covering long periods in the individual's history which can be apprehended in their intimacy only in the form of introspectively written diaries.—*R. Smith* (Clark).

3070. Hecht, S. *The uncertainty principle and behavior.* *Harper's*, 1935, No. 1016, 237-249.—This is a short, popularized account of certain aspects of the indeterminacy principle as it applies to physical theorizing. Its limitations in biological theorizing are pointed out; and possible misinterpretations as it relates to this field are discussed. The author describes an analytical approach to the problems of biology. This is a procedure involving analysis at a particular level in terms of the most satisfactory simplifying assumptions. At one level a human being may be an actively willing organism; at another level he may be a determined response system. Both responses are necessary for a balanced life.—*C. H. Graham* (Clark).

3071. Kuwata, Y. *On the commemoration of the seventieth birthday of Prof. M. Matsumoto.* *Jap. J. Psychol.*, 1934, 9, 743-748.—The scientific career and the contribution to Japanese psychology of Prof. M. Matsumoto are briefly described.—*R. Kuroda* (Keijo).

3072. Langer, W. C. *An apparatus for studying sensorimotor learning, retention, and reaction time.* *J. gen. Psychol.*, 1935, 12, 228-238.—A detailed description is given of an apparatus which may be used in the study of various phases of sensorimotor learning in conjunction with one another.—*H. Cason* (Wisconsin).

3073. Lehman, H. C., & Witty, P. A. *Objectives and aims in the introductory course in psychology.* *J. appl. Psychol.*, 1934, 18, 681-695.—Analysis of difficulties encountered in formulating objectives for an introductory course in psychology and a discussion of attempts to define objectives in the general curriculum.—*R. S. Schultz* (Psychological Corporation).

3074. Luria, A. R. *L. S. Vygotsky. Character & Pers.*, 1935, 3, 238-240.—Vygotsky, the leading psychologist of the Soviet Union, who died June 11, 1934, made two outstanding contributions to modern psychology. First, he developed the concept that the determining factor in the psychological development of the child is its social development, with special emphasis on the role of language. Second, he tried to apply psychology to the solution of some of the practical problems of daily life, particularly in the fields of education and mental disease. His work on the education of the mentally defective and on schizophrenia is of particular value. A list of his ten major writings is appended.—*M. O. Wilson* (Oklahoma).

3075. Parell, E. [Ed.] *Zeitschrift für politische Psychologie und Sexualökonomie.* Copenhagen:

Verl. f. Sexualpolitik. Vol. 1, No. 1, May, 1934. Dkr. 3.00 per number.—*R. R. Willoughby* (Clark).

3076. Ruckmick, C. A. *The psychology of a psychologist.* *Proc. 1a Acad. Sci.*, 1933, 40, 187.—Body, mind and stimulus are distinctly separate entities and, from scientific angles, organic wholes.—*B. Wellman* (Iowa).

3077. Schlick, M. *Über den Begriff der Ganzheit.* (On the concept of totality.) *Erkenntnis*, 1935, 5, 52-55.—The concept of the whole is loosely used in modern biology, psychology, and sociology. Unless both whole and part are precisely defined the discussions of organismic biology and Gestalt psychology are in danger of becoming meaningless. The author defines wholes as "relatively invariant groupings of parts." So defined, the concept may be used to great advantage; in fact, it is indispensable to sociology and psychology.—*J. F. Brown* (Kansas).

3078. Skinner, B. F. *The generic nature of the concepts of stimulus and response.* *J. gen. Psychol.*, 1935, 12, 40-65.—A theoretical discussion of stimuli, responses, reflex preparations, organic and environmental patterns, and the defining properties of stimuli and responses.—*H. Cason* (Wisconsin).

3079. Skinner, E. F. *Mind, body and health. An introduction to psychology.* London: H. K. Lewis, 1935. Pp. v + 42. 2/-.—An elementary introduction to psychology written from a physiological point of view. The facts about conditioned reflexes are described and illustrated. Memory is explained as the functioning of patterns of brain cells. Emotional, instinctive, and cognitive disturbances resulting in ill health are all phrased in terms of the Pavlov theory of conditioned reflexes. Mind is considered most probably to consist of a particular set of so far undiscovered brain cells; but the author is very cautious in this part of his exposition.—*F. C. Bartlett* (Cambridge, England).

3080. Stern, W. *Allgemeine Psychologie auf personalistischer Grundlage. I.* (General psychology on the basis of personalistics. I.) Hague: Nijhoff, 1935. Pp. 364.—This volume contains the first three parts of the whole work, viz.: general introduction, perception, memory. The author's theory of personalistics abolishes traditional and current dualisms in psychology. The central concept is that of the "person," which carries forward in a comprehensive way the trend toward the "total organism" to be found elsewhere in psychology. Psychological description is thus stated from the point of view of the individual person. By this treatment of topics customary in text books, the issues between the conscious and the unconscious, the psychical and the physical, etc., are lost in any given instance. Throughout the person is presented as a dynamic totality at the center of an expanding and contracting world that is in part milieu and in part of his own making. Chapter 4, on the personalistic foundations of psychology, contains an outline and the working program of the special point of view.—*H. D. Spoerl* (North-eastern).

3081. Wingfield-Stratford, E. **New minds for old.** New York: Macmillan, 1935. Pp. 452. \$3.00.—This book discusses for the layman "The Art and Science of Mind Training." It is divided into 4 parts: Book I deals with the general foundations of mental hygiene; Book II with the problems of "Mind Building"; Book III with the problems confronting the average man in the present state of social development; and Book IV with the problems of the "Mind in Action" in facing the difficulties involved in seeking self-expression and personal gratifications. There is no index.—*M. H. Erickson* (Eloise Hospital).

[See also abstracts 3222, 3454.]

SENSATION AND PERCEPTION

3082. Bartlett, F. C. **The problem of noise.** Cambridge: Univ. Press, 1934. Pp. x + 87. 3/6.—This is an extension of two lectures given at the invitation of the National Institute of Industrial Psychology, and contains a preface by C. S. Myers. It is in the main a summary of recent research on the effects of noise on the human organism. The first chapter deals with direct physiological effects and with some of the relevant physical phenomena. In the second chapter the established psychological effects of noise are discussed. In the third chapter an attempt is made to indicate immediate practical steps that can be taken, both by public bodies and by private persons, to combat the difficulties and the disabilities to which undue noise may lead.—*F. C. Bartlett* (Cambridge, England).

3083. Bartley, S. H. **The comparative distribution of light in the stimulus and on the retina.** *J. comp. Psychol.*, 1935, 19, 149-154.—Experiments on the excised eyes of rabbits demonstrate that "the distributions of the light in the stimulus and upon the retina are materially different. The stray light which is to be found outside the image is, except in special cases, a material fraction of that in the image. It has several sources, namely, the light admitted through the sclera, that reflected from the image, and stray light from the lens." The author points out that, "In general, this 'extra-imaginal' stimulation cannot be disregarded. It, for example, helps to make intelligible the fact that increase in stimulus area shortens retinal reaction time until the image size has approached that of the whole retina. It does not have the spatial limitations of the neural interaction described by Adrian and Matthews, which accounts for the area effect only while retinal images are yet small, though it is no denial of this interaction."—*N. L. Munn* (Pittsburgh).

3084. Bogaert, L. van. **Sur des changements métriques et formels de l'image visuelle dans les affections cérébrales. (Micropsies, macropsies, métamorphopsies, téléopsies.)** (On the metric and formal changes in visual imagery in cerebral disorders. Micropsias, macropsias, metamorphopsias, teleopsias.) *J. belge Neurol. Psychiat.*, 1934, 34, 717-725.—The author gives two case histories presenting epileptiform excito-sensory disturbances of olfaction, vision, audition, equilibration and postural model.

These symptoms are probably due to lesions in the temporo-parietal region, either near the ventricular region or in the cortex. This view is based on the investigations of several authors whose interpretations of similar clinical pictures are discussed.—*H. Sys* (Cornell).

3085. Cason, H. **General visceral sensations.** *J. gen. Psychol.*, 1935, 12, 214-222.—The subjects taken up are those of the nerves involved in general visceral sensations, the influence of peripheral structures, afferent paths in the respiratory system, afferent paths in the cardiovascular system, afferent paths in the gastro-intestinal system, and the general features of visceral reflexes. The suggestion is made that a sensation should be defined as "the first activity which occurs in the central nervous system as a result of nervous impulses passing to it over the afferent paths, regardless of whether this activity is conscious or not."—*H. Cason* (Wisconsin).

3086. Chleusebaigue, A. **El problema luminoergológico de la transluminación en el treball de precisió ocular.** (The ergological problem of transillumination in work requiring visual accuracy.) *Rev. Psicol. Pedag.*, 1934, 2, 316-335.—The purpose of this study is the comparative analysis of the ergological characteristics of direct lighting and transillumination, with eventual application to the textile industry. This introductory instalment states the problem and describes the experiments. The focus of the lumino-ergological problem is not technical improvement but adaptation to the psychophysiology of visual perception. Although improved density and distribution of illumination increase the quantity of output, they do not improve ergological exactness, i.e. quality. This is concerned with the creation of maximum contrast, which brings up the question of transillumination. The experiments consisted in tracing technical drawings through transparent paper by direct lighting and by transillumination. The process of tracing is involved in every task requiring visual accuracy on transparent or translucent material. The installation consisted of a lamp above and below a table, in the center of which was a window of mat-surfaced glass on which the drawings were laid. The density of illumination used was the individual optimum, determined experimentally for each mode of lighting. Accompanying studies of ocular fatigue were made. The results demonstrated clearly the ergological superiority of transillumination in processes requiring visual precision.—*M. E. Morse* (Baltimore).

3087. Crider, B. **The relationship of eye muscle balance to the sighting eye.** *J. exp. Psychol.*, 1935, 18, 152-154.—The purpose of the study was to determine whether unilateral sighting preferences were related to characteristic differences in the ocular muscle balance of the two associated eyes. The commonly used screen and fixation tests were used for determining eye-muscle insufficiencies. Insufficiencies were listed for (1) the eye which did not converge in the fixation test; (2) the eye which recovered its fixation more slowly on removal of the screen; (3) the eye which converged or diverged in contrast to the

eye which maintained its equilibrium; and (4) the eye which made the greatest excursion behind the screen. An analysis of the results shows that the eye with the muscle insufficiency as defined in the present study is very seldom the sighting or dominant eye.—H. W. Karn (Clark).

3088. Culler, E., Finch, G., & Girden, E. **Function of the round window in hearing.** *Amer. J. Physiol.*, 1935, 111, 416-425.—The auditory threshold of dogs for a 1000-cycle tone was determined by conditioned paw withdrawal technique. The cochlea was then exposed by opening the bulla under anesthesia and small plugs made of chewing gum surrounded by gauze were pressed lightly against the round window membrane. Care was taken not to involve the stapes. Threads from the plug were carried through the opening of the bulla and through the external wound. In 9 animals stopples were placed in the bulla while in 5 the aperture was left open. Hearing tests were made from 6 to 24 hours after operation. Tests were first made with "plugs in" and were followed at about a 15-minute interval by tests with "plugs out," the chewing-gum plugs having been withdrawn by means of the protruding threads. One animal was tested at both 1,000 and 400 cycles. The withdrawal of the plugs showed a gain of hearing sensitivity of from 1.1 to 16 decibels. There was no evidence of gum on the ossicles. The need for actual hearing tests, as well as electrical recording from nerve or cochlea, is stressed.—T. W. Forbes (N. Y. Psychiatric Institute).

3089. Culler, E., Finch, G., Girden, E., & Brogden, W. **Measurements of acuity by the conditioned-response technique.** *J. gen. Psychol.*, 1935, 12, 223-227.—The authors give experimental results in support of the conclusion that "By utilizing methods based upon the principle of substitute reinforcement (buzzer substituting for electric shock) it is possible to obviate, in whole or in part, the difficulties encountered in measuring the sensory acuity of animals; and to derive limens whose precision equals that of competent human subjects."—H. Cason (Wisconsin).

3090. Dahlmann, R. **Über Querdissparation und Gestaltauffassung mit besonderer Berücksichtigung des Panumschen Phänomens.** (Binocular parallax and the perception of form, with particular reference to the Panum phenomenon.) *Arch. ges. Psychol.*, 1934, 90, 504-560.—Experimental data lead the author to conclude that the role of visual parallax in depth perception has been greatly overemphasized. Depth perception is primarily a process of perceiving whole forms (*Gestaltauffassungsvorgang*).—E. L. Kelly (Connecticut State).

3091. Douglass, L. C. **Color sensitivity as a test of fatigue.** *Proc. Ia Acad. Sci.*, 1933, 40, 193-194.—Morning and evening records of size of retinal fields for blue, red and green lights projected through an opaque screen were compared. The Cameron tangimetric campigraph was used. Relative size of color fields is suggested as an objective test of fatigue.—B. Wellman (Iowa).

3092. Durup, G., & Piéron, H. **Les temps d'action des accroissements de brillance juste perceptibles.** (The time of action in just noticeable differences in brightness.) *Année psychol.*, 1934, 34, 41-52.—With the addition of short stimuli, what is the time of the action of supplementary light necessary to achieve a just noticeable difference in intensity of sensation? A tachistoscopic disk, with two bands of light and a fixation point between, was rotated with an opening of 46°. The task was to determine the optimal time of application of the additional stimulus, and the inoptimal time of increase. In order to notice a just perceptible difference, a constant rate of relative increase of brillance must be followed. An absolute rate is too great to raise the limen. There is evidence of great variability.—J. Steinberg (Columbia).

3093. Fry, G. A., & Bartley, S. H. **The relation of stray light in the eye to the retinal action potential.** *Amer. J. Physiol.*, 1935, 111, 335-340.—By alternating two stimulus areas so that one appeared when the other disappeared the stray light was held constant and the focal areas were given a chance to manifest themselves independently of the non-focal area. The lack of a retinal potential response indicated that the retinograms recorded only the non-focal activity. Changes in latency of the b-wave produced by changing stimulus area were similar to variations of latency produced by changing intensity. Since both factors would affect stray light similarly, it is concluded that the effects of changing the area of the stimulus are produced by changing the quantity of stray light. Variations of the distance apart of four small stimulus areas did not affect the latency of the b-wave.—T. W. Forbes (N. Y. Psychiatric Institute).

3094. Gault, R. H. **Les sens vibro-tactiles.** (The vibro-tactile senses.) *Année psychol.*, 1934, 34, 1-22.—The apparatus consisted of a microphone, an amplifier, and a receiver. The observer placed his fingers on the receiver, in order to feel the vibrations of what was being spoken. Two forms of stimuli were used—monosyllabic words taken from a book on the study of lip reading, and a series of phrases varying from 8 to 13 syllables. The subjects were deaf, and ranged from 6 to 35 years in age. Isolated monosyllables were less exactly recognized by observation of the lips, with visual stimulation only, than with visual and tactual stimulation. This affirms the existence of a vibratory sense distinct from other senses.—J. Steinberg (Columbia).

3095. Goldstein, K. **Über monokuläre Doppelbilder. Ihre Entstehung und Bedeutung für die Theorie von der Funktion des Nervensystems.** (Monocular diplopia. Origin and significance for a theory of nervous-system function.) *Jb. Psychiat. Neurol.*, 1934, 51, 16-38.—Organically determined monocular double images appear with the reduction of efficiency in the optical apparatus and the excitation of the degenerated (*herabgesetzten*) retinal parts. The visual sensitivity of a place on the retina, even on the macula, is also dependent upon the position of the eye.—P. Krieger (Leipzig).

3096. Gordon, K. **Perception and imagination.** *Psychol. Rev.*, 1935, 42, 166-185.—Although perception is commonly defined as awareness of objects present to sense, while imagination is awareness of those not present to sense, yet the two shade gradually into each other. Perceptual images must be classed as imaginal constructs because: (1) such images reflect individual perspectives due to the individual's organic structure, his history and habits, and his present situation; and (2) the content of the individual's perceptions is due in part to social selection, to coordinated acts of many persons, and is in part motor. An enumeration of classes of perceptibles places simple sense qualities at one extreme and allows for emotion, character, action, and certain abstract ideational features at the other extreme.—A. G. Bills (Chicago).

3097. Hayes, S. P. **Sensory compensation, or the vicariate of the senses.** *Outlook for Blind*, 1934, 28, 67-71.—The author compares experimental studies of the blind made by Griesbach in 1899 and by Seashore in 1918. Krogus had previously claimed that sound localization was superior in blind subjects, when he studied a group of 6000 subjects. Griesbach found no such superiority. Seashore, with exact methods and modern apparatus, found the blind slightly superior in localization. Experiments conducted by various investigators indicated that in discrimination of intensity of sound there was no real inequality between sighted and blind subjects. The author, using a Western Electric audiometer, found no sensory compensation in blind subjects. Experiments in pressure discrimination, using weighted cubes, yielded contradictory results in various studies made by other authorities. Hayes found the blind inferior to sighted subjects in this field. Discrimination of active pressure, as used in daily tasks, according to Seashore, indicated that the blind were inferior to the seeing in this test (Seashore's and Griesbach's subjects). Esthesiometer measurements by Brown and Stratton indicated that the blind were superior to the sighted, but the order of efficiency given by them seemed to indicate that their instruments measured training, rather than native sensitivity. Investigators do not find the blind superior in sensations of taste and smell. French (California) attributes any superiority gained to education, rather than to increased native sensitivity, in the blind as compared with seeing persons.—S. S. Hawk (Southern California).

3098. Hayes, S. P. **Sensory compensation, or the vicariate of the senses.** *Outlook for Blind*, 1934, 28, 122-129.—The author discusses the performance of Wileta Huggins, a deaf-blind girl who seemed to possess an unusual degree of sensitivity for which it was difficult to account. Jastrow, in experiments at Wisconsin, established the probability that the girl possessed some remnants of vision and audition, which explained her otherwise remarkable feats. This was later borne out by the report of examining physicians, who found good hearing in one ear, some hearing in the other, and 50% vision. She was highly

sensitive to touch and smell, however. The importance of impressions received through vibrations is indicated by the ability of the deaf-blind to follow conversations by touching the external portions of the speech mechanism. Helen Keller reports that she senses musical vibrations by touching the apparatus, and that she even receives some sound communications without physical contact. Many investigators have reported unusual acuteness in blind subjects in various sensory fields. Swift explained their expertness in the remaining sensory avenues on the basis of intelligent application. Bürklen believed that the blind acquire efficiency through the necessity of making good use of the remaining sense organs, and that the "skill" is not congenital. This seems to be especially true for the more elemental sensations of taste, smell and touch. Careful investigations indicate that the blind are not superior to the seeing in sensory discrimination, but that efficiency is gained by them through long-continued practice, attention and adaptation. In other words, the skill of the blind in the application of the remaining senses is acquired, rather than native.—S. S. Hawk (Southern California).

3099. Hoagland, H. **Adaptation of cutaneous tactile receptors. II.** *J. gen. Physiol.*, 1934, 18, 255-264.—Studies of axon potentials set up by pressure stimuli applied to single cutaneous receptors in the frog's skin indicate that the mechanical stimulus excites the nerve endings directly. Adaptation to constant or intermittent pressure may be due to a reduction in excitation which results from a release of potassium from surrounding epithelial cells.—C. H. Graham (Clark).

3100. Hoff, H., & Pötzl, O. **Über eine Zeitrafferwirkung bei homonymer linkseitiger Hemianopsie.** (The effect of a time disturbance in homonymous left-sided hemianopsia.) *Z. ges. Neurol. Psychiat.*, 1934, 151, 599-641.—The perceptual process is divided into two parts, of which one is like the cinematographic picture and the other is comparable to the projection. It is generally agreed that these were separated from each other in the first phase of the case under discussion. Hence it was a question of disturbances of orientation based upon interference phenomena of the impulses deviating from the right and left cerebral lobes.—P. Krieger (Leipzig).

3101. Holder, F. E. **Functional eye strain.** *Amer. J. Optom.*, 1935, 12, 117-120.—R. J. Beitel, Jr. (Clark).

3102. Hughson, W., & Witting, E. G. **An objective study of auditory fatigue.** *Acta oto-laryng., Stockh.*, 1934, 21, 457-486.—The animals were anesthetized and the sound as taken from the auditory nerve was compared with the original stimulus. The tympanic membrane was found to amplify the magnitude of all sounds perceived and to increase the liability of auditory fatigue. The intrinsic muscles of the ear showed no accommodation function, but were merely protective. Their contraction reduced overload and fatigue. When they were cut both overload and fatigue were increased. Evidence was found to support the theory of the "safety valve" function of

the round window. The sensory cells of the inner ear seemed to be the site of auditory fatigue. The experiments with bone conduction did not produce fatigue of either the middle or the inner ear. Any frequency of stimulation at high intensity produced fatigue throughout the entire range of frequencies used, 180-4000 d.v. Bibliography.—*M. B. Mitchell* (New Hampshire State Hospital).

3103. *Huizinga, E. Über die Schallreflexe von Tullio.* (The acoustic reflexes of Tullio.) *Pflüg. Arch. ges. Physiol.*, 1934, **234**, 665-669.—The findings of Tullio (head movement in the direction of a semi-circular canal upon acoustic stimulation after opening of its bony roof) are confirmed. It is very probable that there is a stimulation of the appropriate crista. In the case of the horizontal canals there is a surprising similarity to the rotary reaction. The reactions can be made to work together as well as in opposition to each other. In agreement with Tullio, it is found that these reactions remain after removal of the cochlea, but disappear after closing the external auditory canal. Tullio's assumption that the reflex excitation of the appropriate crista increases through opening is doubted very much. More probable is the explanation that through the presence of a second opening the labyrinth fluid is given occasion to escape, and that consequently acoustic waves become effective upon the crista. An influence of the direction of sound could not be found. Tullio's designation "acoustic orientation reflexes" (*Schallorientierungsreflexe*) is therefore, probably, not chosen correctly.—*W. Reitz* (Chicago).

3104. *Hulin, W. S. The effect of tactual localization of movement during stimulation.* *J. exp. Psychol.*, 1935, **18**, 97-105.—In both types of movement tested the right forearm swung through an horizontal arc of 90 degrees between the limits of a sagittal position straight forward from the side of the body and a transverse position across the stomach. In the first series, when the forearm was stimulated as it swung in, the forearm remained in (across the stomach) while the judgment was made; and when the forearm was stimulated as it swung out, the forearm remained out (straight forward) while the localization occurred. For each observer the constant error of localization for all the inward swings and the constant error for all the outward swings were calculated. In the second series, when the forearm was stimulated as it swung in, the forearm immediately swung out again to the starting position, in which position the localization took place; likewise, when the forearm was stimulated as it swung out, the forearm immediately swung in again to the starting position where the localization occurred. Again, the two constant errors of localization for each type of swing for each observer were calculated. All results are presented in tabular form. It is pointed out that the significance of the findings will depend upon the future study of other movements.—*H. W. Karn* (Clark).

3105. *Karn, H. W. The function of intensity in the spatial summation of subliminal stimuli in the retina.* *J. gen. Psychol.*, 1935, **12**, 95-107.—Experi-

ments were carried out on the summation of subliminal stimuli between two retinal areas when the intensity of the stimulus at one area varied from zero intensity to a point where it was equal to the intensity of the stimulus at the other. The results showed a decrease in the intensity of stimulation necessary to produce threshold at one area with an increase in the intensity of a subliminal stimulus at an adjacent area. The findings corroborated the well-established fact of spatial summation, and they also demonstrated that summation is a function of intensity. Subliminal stimuli summate at a region of the retinal nervous structure where the paths from both stimulated areas converge, and the state of excitation at this point of convergence may be modified subliminally by the degree of excitation.—*H. Cason* (Wisconsin).

3106. *Kompagnéetz, S. De l'état de l'appareil otolithique dans la névrite du nerf auditif.* (The condition of the otolithic apparatus in neuritis of the auditory nerve.) *Acta oto-laryng.*, *Stockh.*, 1934, **21**, 529-538.—Six cases are reported of deafness following acute infections. In some of these cases the semi-circular canals still functioned quite normally. In some cases of neuritis only a part of the area supplied by the cochlear branch of the auditory nerve was affected. The otolithic apparatus sometimes functioned when the semi-circular canals could not. The functioning of the semi-circular canals was tested by examining the eyes for nystagmus following rotation and following caloric stimulation of the ears. The functioning of the otolithic apparatus was judged by examining the counter-rotation of the eyes when the head was inclined at an angle of 90 degrees. It was concluded from this order of elimination of function during neuritis of the auditory nerve that the cochlear organ is the youngest phylogenetically, the semi-circular canals are next to the youngest, and the otolithic apparatus the oldest. Bibliography.—*M. B. Mitchell* (New Hampshire State Hospital).

3107. *Lashley, K. S. The mechanism of vision. VIII. The projection of the retina upon the cerebral cortex of the rat.* *J. comp. Neurol.*, 1934, **60**, 57-79.—After making a variety of lesions in the area striata of rats, the author mapped all retrograde degenerations in the dorsal portions of the lateral geniculate nuclei. The projection of the degenerated areas of the lateral geniculate nucleus upon those of the cortex suggests something like a point-to-point correspondence. Also, the different areas of the retina involved in monocular and binocular vision are represented in the area striata of the rat.—*C. P. St ne* (Stanford).

3108. *Lauer, A. R. Factors which influence visibility in daylight and under artificial illumination.* *Proc. Ia Acad. Sci.*, 1933, **40**, 185.—The most important factors in visibility of automobile license plates are: difference in reflection factors of legend and background, ratio of surface of legend to background, spacings of letters, stroke of letter or number, ratio of stroke to width and ratio of width to height. Light backgrounds with dark letters are superior to reversed conditions.—*B. Wellman* (Iowa).

3109. Lythgoe, R. J. *Practical physiology of the sense organs*. Oxford: Univ. Press, 1934. Pp. 30. 1/-.—This is an elementary handbook describing simple experiments on the sense organs which need a minimum of apparatus and preparation. The book is specially directed to meet the needs of the medical student. 25 pages deal with visual experiments, and a few experiments on skin sensations, the ear, and taste and smell follow.—F. C. Bartlett (Cambridge, England).

3110. Mee, A. J. *Saveur et constitution chimique*. (Taste and chemical constitution.) *Sci. Progr.*, 1934, October.—The sense of taste has a faculty of discrimination inferior to that of the sense of sight. From the point of view of taste one knows only five classes of substances, sweet, bitter, salt, acid and tasteless. Some authors, however, classify metallic taste and the alkaline taste as of equal importance. It is very difficult to distinguish the various degrees of sweetness and acidity. There is certainly a relationship between taste and chemical constitution. Acid taste is due in a great part to concentration of hydrogen ions. Sweet taste is due to the (CHOH) group. Bitterness seems to be associated with another group pointed out by L. Henry. G. Cohn linked together in 1914 a number of materials according to their relationship between taste and chemical constitution, and he showed among other interesting things that sweet substances and bitter substances are directly associated from the point of view of chemistry. More recently, Oertly and Myers have discovered that for the production of sweet taste two factors are necessary, one group which they call glucophore and another which they call auxogluc. For the bitter taste it is not yet possible to form a theory.—L. S. Selling (Wayne).

3111. Miyazaki, M. *On certain primordial common characteristics among different senses*. *Jap. J. Psychol.*, 1934, 9, 771-792.—In this paper it was intended to test experimentally the assumption that there exist certain intermodal characteristics among hearing, seeing, touching and perceiving of vibration in the process of name-giving. Normal, congenitally deaf and blind children were used as subjects, and D. Usnadze's technique with the necessary modifications was adopted. Summarizing, it seems to be pretty certain that there exist some characteristics which are common among different kinds of sensory experiences. These common factors might make the psychological basis of the name-giving. They can be described as intermodal. Thus Von Hornbostel says expressively: "Vocal speech is the acoustic expression of sense; it is sounding sense." The so-called senseless voice-complexes might indeed be meaningless, but in fact they are not devoid of sense. Genetically the common intermodal characteristics might be taken as suggesting the existence of a certain primordial kind of sensory experience. The "Ursinn" might have developed and differentiated into several sensory bifurcations. "Bewegtheit" (agitation) can be regarded as the motive of the differentiation.—R. Kuroda (Keijo).

3112. Needham, J. G. *Contrast effects in judgments of auditory intensities*. *J. exp. Psychol.*, 1935, 18, 214-226.—Contrast effects appear in absolute judgments of auditory intensities when the judgment of a series of stimuli is preceded by the judgment of a series at a significantly different level of intensity. The nature of these effects is an increase or a decrease in the relative preponderance of one or the other category of judgment. There is some indication that with practice the contrast effects are diminished or disappear altogether. The direct contrast effect is mediated, not by a series of stimuli as a whole, but by judgments upon certain definite members of the stimulus scale.—E. H. Kemp (Clark).

3113. Parker, G. H. *The movements of the retinal pigment*. *Ergebn. Biol.*, 1932, 9, 239-291.—Review of known facts concerning retinal pigment in vertebrates, mollusks and arthropods. In vertebrates pigmentary migration has been noted in all groups except the mammals. The influence of temperature and seasons, together with the relation to receptor cells, cones and rods is noted. In mollusks pigmentary migration has been found in *Planorbis* and in the cuttlefish. In arthropods nothing definite is known about ocelli; in compound eyes migration has been studied in the Palaemonidae and rhythmic phenomena observed.—(Courtesy *Année psychol.*)

3114. Rikimaru, J. *A study of the individual and racial differences in taste reaction using the same stimulus compound*. *Jap. J. Psychol.*, 1934, 9, 901-921.—Using the chemical compound para-ethoxyphenylthio-carbamide, 8824 Japanese, 5933 Formosans (Chinese origin), and 1756 natives (Formosan aborigines of various tribes) were tested. There were great individual differences, some experiencing a bitter taste, others finding it sweet, sour, or salty, while by some no reaction was felt apart from tactual sensation. Three categories of reaction—the tasteless, the bitter, and the others—may be distinguished. The frequency proportion of the bitter reaction was the highest, the tasteless the next, and that of the others the lowest. The actual size of the frequency percentage for the same category showed, however, a great difference between the various races. As regards the tasteless, it was largest for the Japanese, the Formosans were about 50% of the Japanese, while the natives were less than one eighth of the latter. Comparing the percentages of the tasteless cases for the populations in the north, middle and the south of Formosa, no statistically significant difference was found, which suggests that no local influence affects the ratio. Between the sexes of all the Japanese, Formosans and Atyal peoples no difference was ascertained in percentage among the tasteless. The frequency difference for the male and female in the case of the Japanese showed no general trend correlated with age in both sexes.—R. Kuroda (Keijo).

3115. Rothschild, D. A. *An analysis of tone quality of orchestral instruments*. *Proc. Ia Acad. Sci.*, 1933, 40, 189.—Sound waves from the instruments of the orchestra were phonophographed and tone quality

determined by means of the Henrici harmonic analyzer.—*B. Wellman* (Iowa).

3116. Ruyer, R. Les sensations sont-elles dans notre tête? (Are our sensations in our heads?) *J. Psychol. norm. path.*, 1934, 31, 555-580.—The question of the localization of sensations is considered by means of an examination of certain paradoxes. The problem is all the more important because of the implications of the wider issue of the relation between mind and body. The experimental method does not completely settle the question and the mere accumulation of facts offers little in the way of a logical conclusion. Bergson has used the facts of pathology to support his views on perception, memory and the part played by the brain. According to him sensations are not in the head. The author believes him to be entirely wrong. The projection of our sensations need not be explained, for this projection does not exist. As an opponent of monism, Lovejoy opposes cerebral localization of sensations as well as localization in the external world, and reverts to the position of the seventeenth-century dualist. Although the author uses different philosophical concepts he agrees with Russell's main conclusions.—*P. S. de Q. Cabot* (Harvard).

3117. Stenius, S. Synövningar vid skelningsamblyopi och deras resultat. (Visual training of cases with squint-amblyopia and its results.) *Finska Läkarsällsk. Handl.*, 1935, 77, 51-59.—The writer reports on treatment of 50 children with squint, ranging in age from 2 to 8 years. The training lasted 1-2 hours daily for a period varying from $\frac{1}{2}$ to 13 years, during which time the patients wore special glasses. These spectacles had a perfectly dimmed lens for the fixating eye and a lens with proper correction for the squinting eye. During the training periods the children were occupied through play with figures and reading. The rest of the day they wore regular louchettes. The author considers 28 cases to have received regular and sufficient treatment. Out of these, 15 patients showed no symptoms of amblyopia at the end of the training (vision $\frac{5}{4}$ for both eyes). In 3 cases, no improvement was found. Successful results were obtained in all children from 2 to 4 years of age. Since, in general, the younger the child the less pronounced the anomaly, the results were better for the younger group. Bibliography of 14 titles, and summary in German.—*V. Coucheron-Jarl* (Mooseheart Laboratory for Child Research).

3118. Sutton, R. M. Demonstration of beat note and other acoustic phenomena. *Science*, 1935, 81, 255-256.—Description of a simple method for demonstrating beat note, temperature effect, gas density effect, and Doppler effect. A readily constructed, inexpensive apparatus is described.—*R. H. Brown* (Clark).

3119. Telford, C. W., & Denk, W. E. The inconstancy of the Weber-Fechner 'constant' for audition. *J. exp. Psychol.*, 1935, 18, 106-112.—It is shown that the value of the Weber-Fechner "constant" K ($\Delta E/E$) for audition is not in reality a constant, but is a function of: (1) The absolute in-

tensities of the tones compared. The range of values of K obtained in the present study for different intensities is from .10 to .38. (2) The subjects on whom the measurements are made. Values of K range from .09 to .38 for different subjects. (3) The frequency level of the tones. The variation in value of K with change in frequency of the tones compared is limited to the lower frequencies. (4) The time duration of the tones. The optimum duration of the tones is found to be 0.3. (5) The interval between the tones. The shortest time interval used (0.4 seconds) was found to result in better discrimination (lower value of K) than any longer interval up to 10 seconds.—*H. W. Karn* (Clark).

3120. Totten, E. Eye movement during visual imagery. *Comp. Psychol. Monogr.*, 1935, 11, No. 3. Pp. 46. \$0.75.—By photographing a point of light reflected by the cornea, the author obtained evidence that the eye movements involved in imagining an object tend to approximate those used in its original perception. Of 105 experiments, 75 supported this conclusion, 21 were doubtful, and 9 were negative. There are 56 reproductions of photographic records. Bibliography.—*N. L. Munn* (Pittsburgh).

3121. Triepel, H. Zur Frage des absoluten Gehörs. (On the question of absolute pitch.) *Arch. ges. Psychol.*, 1934, 90, 373-379.—A description of two cases in which individuals were able to judge correctly the relative positions of tones in the scale but regularly judged the tones a half tone too high. The author believes that absolute pitch is definitely influenced by one's musical experience.—*E. L. Kelly* (Connecticut State).

3122. Undritz, W., & Sassosow, R. Über Schallschädigung und Sacculusfunktion. (Noise damage and sacculus function.) *Acta oto-laryng., Stockh.*, 1934, 21, 487-501.—The authors used acoustic vibrations above the limit of hearing. The apparatus was constructed so that the vibrations could be transmitted either through air or water. The research animals in the first two series were exposed to the vibrations for 30 minutes per day. In the third series, they were exposed to it for from 7 to 10 minutes. The white rats used in the first series showed no destruction of the tympanic membrane and only one animal had a hemorrhage in the middle ear, but all had marked injury in the inner ear. The organ of Corti, the nerve, and the otolith apparatus of the sacculus were all seriously damaged. There was a loosening of the cell bands, lesion of the cells of the organ of Corti, and a tearing away of the otolith membrane. In the second series, frogs and small fish were used. The former suffered little injury, but the latter suffered considerable injury in the otolith apparatus. In the third series, destruction in the inner ear was found even after relatively short exposure to the vibrations. It was concluded that, since the vibrations caused so much destruction in both the cochlea and the sacculus, the sacculus is affected by periodic impulses and is closely related to the function of hearing. Bibliography and 6 plates.—*M. B. Mitchell* (New Hampshire State Hospital).

3123. Urban, F. M. Das Weber-Fechnersche Gesetz und die Messbarkeit psychischer Mannigfaltigkeiten. (The Weber-Fechner law and the measurability of mental multiplicity.) *Arch. ges. Psychol.*, 1934, 90, 301-320.—Utilizing data published by Thurstone in 1929 in a study of equal-appearing intervals, a method is developed for proving the measurability of these intervals, thus verifying Thurstone's assumption.—E. L. Kelly (Connecticut State).

3124. Woerdeman, H. L'influence de la température d'un gaz odorant sur la sensation olfactive. (The influence of the temperature of an odoriferous gas on the olfactive sensation.) *Arch. néerl. Physiol.*, 1934, 19, 88-93.—Using isoamyl acetate as an odoriferous substance, the author found that students judged the odor when presented at a temperature of 50° C. as being much stronger than the same odor when presented at ordinary room temperature. The students were unaware of the difference in temperature of the two odoriferous samples.—C. P. Stone (Stanford).

3125. Woodrow, H. The effect of practice upon time-order errors in the comparison of temporal intervals. *Psychol. Rev.*, 1935, 42, 127-152.—Data on the comparison of empty intervals with a standard of 1000 sigma show marked changes in the time-order errors during one 55-minute sitting, and these are cumulative from one sitting to the next. The shift is in a positive direction, and is explained by the tendency for the effect produced by the first stimulus to become modified by two remote standards resulting from the subject's habitual expectancy. One of these is the average magnitude of preceding stimuli; the other is a permanent, absolute standard which the author identifies with the "absolute temporal indifference interval." The shift resulting from practice is therefore probably due to the obliteration of the absolute indifference interval by the series average. It is suggested that the absolute temporal indifference interval is explained by a "natural" attunement of the sensory-cerebro-motor apparatus for certain types of response. Under the experimental conditions here used, the relative difference limen becomes, with practice, equal to one-eighth the length of the standard.—A. G. Bills (Chicago).

3126. Wright, W. D. Intensity discrimination and its relation to the adaptation of the eye. *J. Physiol.*, 1935, 83, 466-478.—The author finds that adaptation does not play any appreciable part in intensity discrimination. He claims, on the basis of his findings, that both Hecht's and his own theories of intensity discrimination, based on the photochemical adaptation process in the retina, are wrong.—M. A. Rubin (Clark).

[See also abstracts 3148, 3154, 3157, 3164, 3167, 3172, 3195, 3201, 3206, 3226, 3233, 3240, 3244, 3420, 3434, 3462, 3508.]

FEELING AND EMOTION

3127. Hutchins, F. F. Fear reactions. *Indiana Bull. Char. Correct.*, 1935, No. 217, 492-498.—C. M. Louttit (Indiana).

3128. Kuroda, R. On the localization of bodily disturbance accompanying emotions. *Jap. J. Psychol.*, 1934, 9, 891-900.—When any emotion reaches a high degree of intensity there takes place a sense of being grazed in a certain locality over the external surface of the body. The sense of being grazed is in quality something like a feeling experienced when in a bath one received in the abdominal region a surge caused by moving the hand. It is rough and devoid of compactness, and it is felt near the surface of the skin, never being taken for visceral disturbance, which usually appears deep in the visceral cavity. In looking down from a height, one is aware of the feeling at the calf of the legs at the same instant at which one experiences danger. The author calls this a "calf phenomenon." In the negative emotions, for instance of fear or dread, it is felt at the back, but in the positive emotion of joy, on the other hand, it is localized on the ventral side, especially on the chest. While the sense is static in the "calf phenomenon," it is dynamic in nature in intense fear or joy, i.e., it runs a certain distance with a certain speed; the speed seems to increase in accordance with the increase of the intensity. It closely resembles a sense of touch and is clearly distinguished from visceral or organic sensation by its superficial or at least somatic origin. The fact that it disappears as soon as the emotion concerned loses its intensity or comes to disappear shows that it is essentially bodily changes subjectively experienced in intense emotions. The sense is differently localized in different qualities of emotions; in general the positive emotions are on the ventral side and the negative on the dorsal. This fact is biologically of significance because the positive emotions have to do with situations favorable and acceptable and the negative ones with those unfavorable and rejected by an organism.—R. Kuroda (Keijo).

3129. Ruckmick, C. A. What we don't know about emotions. *Proc. Ia Acad. Sci.*, 1933, 40, 195.—B. Wellman (Iowa).

3130. Slade, W. G. Earthquake psychology. II. *Aust. J. Psychol. Phil.*, 1933, 11, 123-133.—The author discusses the sentimental factors by which the instinctive emotional reaction of fear to an earthquake shock is modified or suppressed: social sentiment; the sense of duty; and habit and training-discipline. Pathological after-effects of an earthquake which are discussed are: neurasthenia; influence exerted by the imagination in accentuating the effects of shock; the weakening of mental and moral control; loss of memory; complexes, including claustrophobia, fear of solitude, susceptibility to panic, general earthquake complex. The author concludes: "In an hour when it might be expected that instinctive behavior would carry (man) away, his actual conduct shows that reason is enthroned, that he acts, not emotionally, but thoughtfully, or ideally, in the true sense of the word, uniting volitional and cognitive powers to control and even inhibit emotional reactions."—R. H. Brown (Clark).

3131. Sonohara, T. A psychological study on the feeling of shame. *Jap. J. Psychol.*, 1934, 9, 847-890.

—The author's statistical investigation by means of a questionnaire has shown that frequency and intensity of anticipative feelings of shame depend, on the one hand, upon the nature of situations, and on the other upon subjective conditions, such as sex, age, temperament, etc. The actual feeling of shame was not always produced regularly in all observers. Of course, failure and punishment made some observers sensible to shame, but such cases were found only when they had been anxious about the task, and had been in a state of uneasiness. Some observers, especially female ones, being reluctant to observe in the experiment, were more often abashed at failure and punishment. Experienced and calm observers who could concentrate their attention on the work were little confounded with such matter and could recover easily the steady attitude for the next task. Thus the mental attitude in the experimental situation had a crucial relation to the elicitation of actual feelings of shame. The unstable sense of the self in an unfamiliar situation is the fundamental basis for this feeling. In such a state of mind failure or being punished set a subject in confusion, and the sense of being seen predominates in him and makes him reluctant to face other persons. This state is called the actual feeling of shame.—*R. Kuroda (Keijo)*.

3132. Trettien, A. W. *Why we feel that way*. Boston: Stratford, 1935. Pp. vi + 452. \$3.00.—This book is a systematic presentation of the various phases of emotional life. The first part deals with such fundamental factors as emotional reactions and race experiences, theories of the emotions, the kinetic system, emotional responses as protective reactions, and the relationship of the sense of well-being to emotional reactions. The second part has chapters dealing with pairs of emotions which are closely allied, such as hunger and thirst, pleasure and pain, fear and anger, love and hate, which are discussed from the standpoint not only of psychology but also of biochemistry and physiology. This part also includes discussions of the emotions of social well-being and the relation of emotions to social conflicts, industry, war, appreciation of the arts, religion, and philosophy of life. The third part is the shortest; it deals with abnormal emotional reactions in the neuroses and "melancholia," crime and the insanities. In discussing insanities there is a stress on endocrinology and physiological reactions. The fourth section of the book treats of the practical application of knowledge of emotions from the standpoint of training, measurement, emotional control, the relations of emotions to habit, temperament, personality and the day's work. Sex control and recreation are taken up in separate chapters in this part. There is no annotation, but there is a two-page bibliography and a four-page glossary.—*L. S. Selling (Wayne)*.

[See also abstracts 3146, 3147.]

ATTENTION, MEMORY AND THOUGHT

3133. Bartlett, F. C. *Remembering*. Scientia, Bologna, 1935, 57, 221-226.—Recognized laboratory

methods for the study of memory are artificial to a high degree. They assume that remembering is primarily a recapitulatory function, and they tend to lead to theories according to which memory consists of a re-stimulation of individualized and isolated traces, between which, by the course of experience, various external bonds of association have been forged. Both experimental data and biological considerations of a general nature demonstrate that these methods are mistaken and that this view is untenable. Remembering, as it occurs in everyday life, is chiefly a reconstructive function, serving the needs of the moment, and following the laws of construction of relevant schemes or frameworks which have been built up out of past events and reactions. In this article some of the evidence for remembering as a constructive activity is set forth, and its significance for psychological methods and theory is considered.—*F. C. Bartlett (Cambridge, England)*.

3134. Berg, H. *Ein Beitrag zur Frage der Gleichförmigkeit des psychischen Geschehens bei Dezimalschätzungen*. (A contribution to the question of the uniformity of mental phenomena in the estimation of tenths.) *Arch. ges. Psychol.*, 1934, 90, 296-300.—Meteorologists at various European airports make regular flights for the purpose of obtaining data, including height of clouds, which is estimated to the nearest 100 meters. 500 to 800 observations from each of six weather bureaus were tabulated and analyzed with respect to the relative frequency of each of the hundred-meter intervals. 28% of the estimated heights ended in 0 (even thousands), 16% ended in a 5 (2500, 3500, etc.), while only 3% ended in a 9. The data for each of the six bureaus showed a remarkable consistency with respect to these number preferences.—*E. L. Kelly (Connecticut State)*.

3135. Chiba, T., & Susukita, T. *A study of the extraordinary memory, specially on the "fundamental idea"*. *Jap. J. Psychol.*, 1934, 9, 749-770.—The subject of the study who has an extraordinary memory is S. Ishihara, twenty-eight years old. Though he says that visual images help his learning, it seems, according to the authors, that imageless thoughts also contribute to it, especially in the plastic complex. It is to be noticed that he said, "When I cannot reproduce something, it does not mean that I have forgotten it; it means only that I cannot find it." The authors think that reproduction depends on subjective attitude, in which feeling has an important position, and conclude that imageless thought plays an important part even in mnemonics, especially in the plastic complex; that forgetfulness must not be supposed to be the complete loss of memory residue.—*R. Kuroda (Keijo)*.

3136. Davis, R. A., & Moore, C. C. *Methods of measuring retention*. *J. gen. Psychol.*, 1935, 12, 144-155.—A description and evaluation of the relearning, recall, and recognition methods of measuring retention, from the special point of view of their use in the school room.—*H. Cason (Wisconsin)*.

3137. Dide, M. *La mémoire. Psychogénèse et pathogénèse*. (The psychogenesis and pathogenesis

of memory.) *J. Psychol. norm. path.*, 1934, 31, 697-721.—Memory implies two sets of conditioning factors, one extrinsic and temporal, the other intrinsic and spatial. The former depends on the affective-instinctive dispositions which influence the selection of percepts and concepts; they are connected with the vegetative nervous system. The latter influence mental integration and enable us to reconstitute the past; these functions are cerebral. Mental disorders can be classified according to these two groupings. Memory can be further regarded as biological, affective, perceptual and conceptual. Biological memory is important because it preserves racial identity in spite of environmental conflicts.—*P. S. de Q. Cabot* (Harvard).

3138. Foucault, M. *Les intervalles entre les lectures et leur influence sur la fixation.* (The intervals between periods of study and their influence upon fixation.) *Année psychol.*, 1934, 34, 23-40.—Upon what law of the size of intervals does the fixation value depend? 12 series of 12 words each and 12 series of artificial words were rotated on a cylinder, with intervals ranging from 10 to 120 seconds. The fixation value increases as the intervals increase, and the increase follows the ascending arm of a hyperbola. The diminution of the fixation value follows the descending arm of a hyperbola.—*J. Steinberg* (Columbia).

3139. Garth, T. R. *A blind puzzle-box.* *J. exp. Psychol.*, 1935, 18, 280-284.—A blind puzzle-box is described and the results of a learning experiment in which it was used are presented. A learning curve was constructed by plotting the time required for solution against the number of trials. 12 men were slightly superior to 12 women in this learning. The reliability of the box was determined by using the time curves of 20 students with the split-half method, and a reliability coefficient of .69 and an index of reliability of .83 were obtained.—*E. H. Kemp* (Clark).

3140. Gordon, K. *Imagination: a psychological study.* Introduction. *J. gen. Psychol.*, 1935, 12, 194-207.—The concept of imagination is important in fields related to psychology, such as morals, esthetics, and education. The author describes the various classes of imaginative products or images.—*H. Cason* (Wisconsin).

3141. Henry, L. K. *A laboratory investigation of problem solving in plane geometry.* *Proc. Ia Acad. Sci.*, 1933, 40, 200.—Stimuli were presented through an exposure apparatus. The subject expressed his ideas verbally, as they occurred, and these were recorded by a microphone-dictaphone unit. The data obtained throw light on the status of insight and meaning in plane geometry.—*B. Wellman* (Iowa).

3142. Kellogg, W. N., & White, R. E. *A maze test of Dunlap's theory of learning.* *J. comp. Psychol.*, 1935, 19, 119-148.—Using a stylus maze and three groups of human subjects (25 to a group), the authors attempted to obtain evidence concerning the validity of Dunlap's beta hypothesis. One group learned the maze by ordinary procedures. Another

learned it by repeating an error immediately after it was made, the experimenter setting the stylus back in the true pathway at the point of divergence from it. The other group retraced, in the true pathway opposite a blind alley which they had entered, a distance equivalent to that of their error. This repetition differed from that of the second group only in direction of movement. The three groups did not manifest significantly different time scores. The second group (repeating errors) made significantly fewer errors than the first group. The advantage of this group over the third (retracing in true pathway) was slight. These and other considerations arising from a more detailed analysis of the data tend strongly to support Dunlap's beta hypothesis of negative practice. The authors believe that different attitudes of attention and different degrees of motivation in the three groups explain the differences in performance elicited by these techniques. Bibliography.—*N. L. Munn* (Pittsburgh).

3143. Klüver, H. *The eidetic type.* *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 150-168.—The experimental study of eidetic images is reviewed and summarized. The contributions and limitations of Jaensch's biotypology are pointed out. The general problem of personality types should not be restricted to the study of frequency distributions. In proposing a "type" the investigator attempts to transform disconnected bits of behavior into a system with definite interrelations. It may be infinitely more important to know whether such systems, such "types," occur at all than to know whether they have a particular distribution in a given group.—*D. G. Marquis* (Yale).

3144. Löwy, M. *Kleiner Beitrag zur Bedeutung und Verwendung der Einfallszahl.* (Minor contribution on the significance and use of freely associated numbers.) *Int. Z. Psychoanal.*, 1934, 20, 100-101.—This paper describes an instance of how a persistent and specific misreading habit was corrected by the technique of obtaining a freely associated number and then asking for associations to each component figure. The previous work on the significance of freely associated numbers and the importance of this technique in facilitating analysis are discussed.—*S. Rosenzweig* (Worcester State Hospital).

3145. Menzies, R. *The comparative memory values of pleasant, unpleasant and indifferent experiences.* *J. exp. Psychol.*, 1935, 18, 267-279.—Amounts of recall for pleasant, unpleasant and indifferent experiences were measured one day, eight days, and 29 days after occurrence, and measures were also taken of intensities of feeling-tone. The following results were found: Frequencies of revival of pleasant, unpleasant, and indifferent experiences showed no important differences; but these frequencies increased as intensities of feeling-tone increased, and this relationship was significantly consistent. There were no significant differences in the percentages recalled of pleasant, unpleasant and indifferent experiences. This was true whether feeling-tones of first experiences or of recalls were considered.

These percentages of recall, however, increased as intensities of feeling-tone increased, and although this relationship was not always consistent, it does appear to be a significant tendency. Thus frequency and extent of recall for ordinary life experiences appear to be correlated with intensity of feeling-tone rather than quality of feeling-tone.—*E. H. Kemp* (Clark).

3146. *Moore, E. H.* A note on the recall of the pleasant vs. the unpleasant. *Psychol. Rev.*, 1935, 42, 214-215.—Meltzer, in his 1930 review of the psychological studies on the recall of affective material, questioned the Freudian interpretation of forgetting. Thirteen studies between 1898 and 1919 had supported Freud, while thirteen in the following decade were opposed. All of these were faulty in technique in one way or another. Nine experiments published since Meltzer's review show the effects of his criticisms in improved technique, and all of them support the contention that the recall of the pleasant is more efficient than that of the unpleasant.—*A. G. Bills* (Chicago).

3147. *Siebert, K.* Die Einstellung im freien Einfall. Eine experimentelle Untersuchung. (Attitude and free association. An experimental investigation.) *Arch. ges. Psychol.*, 1934, 90, 321-356.—This experiment was conducted to determine the validity of the free-association technique as a means of revealing unconscious emotional complexes. The procedure consisted of asking the subject to choose a word representing some aspect of an emotional conflict which he had or was experiencing. The experimenter then gave a supposedly non-emotional stimulus word and asked the subject for further free associations. 15 persons served as subjects, each taking part in about a dozen experimental sessions. The resulting protocols show conclusively that emotional complexes do influence supposedly free associations and that there is a marked tendency for the stimulus word to be integrated into a meaningful whole.—*E. L. Kelly* (Connecticut State College).

3148. *Taylor, J. H.* Responses to startle stimulation. *J. gen. Psychol.*, 1935, 12, 108-131.—A startle stimulus was given while the S's were engaged in a light-discrimination task. There was a decrease in the efficiency of performing the task, and a tendency towards an increase in muscular tension; and these effects persisted throughout the course of the experimental period. S's who were overtrained in the discrimination task showed little loss of efficiency after the startle stimulus, but they did exhibit a persistent increase in muscular tension. S's who were exposed to startle stimulation for four successive periods did not continue to be disturbed by the stimulus.—*H. Cason* (Wisconsin).

[See also abstracts 3096, 3120, 3200, 3456.]

NERVOUS SYSTEM

3149. *Bronk, D. W.* The nervous mechanism of cardiovascular control. In *Harvey Lectures*, 1933-4, Series 29. Pp. 245-262.—A discussion of the history

and some modern developments of the topic. A major part of the presentation is concerned with a summary of work done by the author and his collaborators by means of the electrical recording technique.—*C. H. Graham* (Clark).

3150. *Eichler, W.* Ergänzungen zur Arbeit: Kondensator- und Gleichstromchronaxie (Faktor 0.37). (Supplements to the work on condenser and direct current chronaxy, factor 0.37.) *Z. Biol.*, 1933, 94, 177-186.—(*Biol. Abstr.* IX: 4918).

3151. *Eichler, W.* Quantitatives über die Konstanten der Kondensatortheorie der Nervenreizung. (Quantitative considerations on the constant factors in the condenser theory of nerve stimulation.) *Z. Biol.*, 1933, 94, 187-200.—(*Biol. Abstr.* IX: 4919).

3152. *Eichler, W.* Die zur Schwellenreizung des Nerven erforderliche innere Energie und ihr Vergleich mit der Energieproduktion des erregten Nerven. (The inner energy available for threshold stimulation of nerve and its comparison with the energy production of stimulated nerve.) *Z. Biol.*, 1933, 94, 201-209.—(*Biol. Abstr.* IX: 4920).

3153. *Graham, H. T.* The subnormal period of nerve response. *Amer. J. Physiol.*, 1935, 111, 452-465.—The subnormal period of nerve under yohimbine and other local anesthetics was studied by means of moist temperature chamber, cathode ray and initial and testing shocks. During the subnormal period the maximum height of response was unchanged, but the conduction rate was decreased. The subnormality of conduction rate is less than that of excitability. It is concluded that subnormality is not identical with refractoriness, but that the process associated with it probably begins very early in the nerve response.—*T. W. Forbes* (N. Y. Psychiatric Institute).

3154. *Hasama, B.* Über die elektrischen Begleiterscheinungen an der Riechosphäre bei der Geruchsempfindung. (About electrical concomitants in the olfactory lobe in smelling sensations.) *Pflüg. Arch. ges. Physiol.*, 1934, 234, 748-755.—Even without stimulations there are always observable weak fluctuations in potential in all parts of the surface of the cerebral cortex of the rabbit. If an olfactory stimulus sets in there occurs a current fluctuation ("pre-effect") in a definite part of the basal as well as the medial cortical field of the cerebrum which, in spite of continuous stimulations, dies off. After cessation of the stimulation the fluctuation in the potential is repeated ("after-effect"). On the cut the potential fluctuation is much stronger on the cortical surface than on the gray matter. The different points of current drainage of the olfactory lobe seem to possess no specificity for action-current patterns: all give fundamentally the same picture. The medial part of the lobus hippocampi furnishes the strongest action current. Within the limits of the foregoing observations on three olfactory stimulants no specific differences in the electrograms have been found. Intensity of olfactory stimulation stands in approximate logarithmic relation to the electrical effect. Subcutaneous injection of strychnin increases the effect and counter-

acts fatigue. Brushing the mucous membrane with cocaine solution decreases the effect.—*W. Reitz* (Chicago).

3155. Hayasi, K., & Rittler, G. Über die Abhängigkeit der Zeiterregbarkeit des motorischen Nerven vom Dehnungszustand seines Muskels. (The dependence of the time stimulation of the motor nerve on the extension condition of its muscle.) *Pflüg. Arch. ges. Physiol.*, 1934, 235, 50-52.—Among twelve decerebrated frogs three showed with perfect regularity a shortening (approximately 20%) of the chronaxy of non-intersected motor ischiadicus fibers during passive tension of the gastrocnemius, as has been described by L. and M. Lapicque.—*W. Reitz* (Chicago).

3156. Kato, G. The microphysiology of nerve. Tokyo: Maruzen, 1934. Pp. 139.—Kato and his pupils, using single nerve and muscle fiber preparations in the Japanese toad, have demonstrated the complete recovery of the nerve impulse after passing through a narcotized region, the all-or-none nature of the conducted response of single muscle fibers when stimulated by single nerve fibers, and graded, localized, non-conducted muscle fiber contractions obtainable with weak stimuli and unaccompanied by action potentials. They have also used spinal preparations and have been able to show that ipsilateral afferent stimuli are inhibitory to a crossed-extensor reflex at moderate current strengths but sum with the crossed stimulation at greatly increased current strengths. Kato has suggested the hypothesis of two types of fibers, inhibitory and excitatory, and has succeeded in isolating the two types.—(Courtesy *Science*).

3157. Lashley, K. S. The mechanism of vision. XII. Nervous structures concerned in the acquisition and retention of habits based on reactions to light. *Comp. Psychol. Monogr.*, 1935, 11, No. 2, 43-79.—Rats with cerebral lesions, but possessing an intact geniculo-striate system, retained a light-darkness discrimination. Those possessing few and diffusely scattered remaining cells in the lateral geniculate nuclei manifested a slight loss of the habit. "With complete destruction of both striate areas and complete degeneration of the lateral geniculate nuclei, the animals required as much practice for relearning as for initial learning before the operation." The post-operative loss of a brightness habit followed an all-or-none principle, occurring only after complete destruction of the striate areas. The author's earlier conclusion that "the loss of the habit is proportional to the amount of tissue destroyed, irrespective of locus within the visual area" was thus shown to be incorrect. Relearning of the habit after complete destruction of the striate cortex and degeneration of the lateral geniculate body required no more practice than original learning. Relearning occurred after destruction, also, of the peristriate areas. Retarded relearning followed destruction of the striate areas and severe injury to the optic thalamus on one side. Severe injury to the optic thalamus on both sides prevented relearning. "The accessory optic tracts

and nuclei are not adequate for the formation of visual habits." Bibliography.—*N. L. Munn* (Pittsburgh).

3158. Lorente de Nô, R. The synaptic delay of the motoneurons. *Amer. J. Physiol.*, 1935, 111, 272-282.—The function of internuncial neurones was eliminated from the determination of synaptic delay by using two nerve paths of about the same length, one of which is direct and the second of which involved one synapse, i.e., the innervation to the internal rectus and the external rectus muscles in the eye of the rabbit. All but the horizontal eye muscles were removed; the fourth ventricle was made accessible for stimulation of the proper nerves by extirpation of overlying structures. Isometric myographs and action currents were recorded. The synaptic delay ranged from 0.5 to 1.36 sigma and was roughly inverse to the strength of stimulus. The state of the centers due to the phase of nystagmus affected the delay and the height of the response.—*T. W. Forbes* (N. Y. Psychiatric Institute).

3159. Lorente de Nô, R. The refractory period of the motoneurons. *Amer. J. Physiol.*, 1935, 111, 283-288.—Using the same preparation as that described in the immediately preceding paper, the refractory period of the motoneurons was determined by employing an initial shock stimulus followed by a second testing shock. It is concluded that the refractory period of the motoneurons (dendrites and body including the synapses) cannot be longer than 0.6 sigma.—*T. W. Forbes* (N. Y. Psychiatric Institute).

3160. Schaefer, H., & Schmitz, W. Aktionsstrom und Hüllenleitfähigkeit. (Action current and nerve sheath conductivity.) *Pflüg. Arch. ges. Physiol.*, 1934, 234, 737-747.—The study clarifies physical conditions of action-current drainage. The smaller the resistance of the measuring instrument, the smaller is the action potential in the core of the nerve. This condition increases with the lessening of external resistances for the current flow potential. The "true" action potential is unmeasurable. A monophasic drainage is possible only if the core-sheath relation is constant along the whole nerve. If it is changed artificially the action is distorted. Every artificial change of the sheath conductivity along a limited portion of the sheath has distortions of the action as a consequence. Distortions can be explained by a changed drainage from the sheath and by an increased loss of potential in the core. An action remains shortened if it has passed through a short-circuited nerve region. All bio-electrical processes which are drained in situ must be submitted to a special "current field" analysis. The present study gives such an analysis for the nerve. The drained part of a nerve behaves electrically, not neutrally. A drainage from a nerve-muscle or nerve-cord preparation is of doubtful value as long as one does not know the current paths at the drainage points.—*W. Reitz* (Chicago).

3161. Schriever, H. Ueber den Einfluss übergeordneter Zentren auf die Summation im Rückenmark. I. Ergebnisse bei verschiedener Temperierung einzelner Abschnitte des Zentralnervensystems. (On

the influence of superior centers on summation in the cord. I. Results of differential timing of single sections of the central nervous system.) *Z. Biol.*, 1933, 94, 285-306.—(*Biol. Abstr.* IX: 4925).

3162. Schriever, H., & Hegemann, F. Untersuchungen über die elektrische Erregbarkeit der Sinnesnerven. (Investigations on the electrical excitability of the sensory nerves.) *Z. Biol.*, 1933, 94, 253-263.—(*Biol. Abstr.* IX: 4924).

3163. Spiller, W. G. Corticonuclear tracts for associated ocular movements. *Arch. Neurol. Psychiat.*, Chicago, 1932, 28, 251-271.—(*Biol. Abstr.* IX: 4926).

3164. Squires, P. C. The problem of auditory bilateral cortical representation, with special reference to Dandy's findings. *J. gen. Psychol.*, 1935, 12, 182-193.—The author passes in review the evidence for and against the theory of auditory bilateral representation, and takes a position against Dandy and in favor of the theory.—H. Cason (Wisconsin).

3165. Wassiliew, L. L., & Iwanow, K. I. Wirkung eines überreizenden Wechselstroms auf die alterierte Nervenstrecke. (Effect of hyperstimulation by alternating current on an altered section of nerve.) *Pflüg. Arch. ges. Physiol.*, 1934, 235, 184-193.—A strong parabioc agent—in this study a hyperstimulating alternating current—can produce two diametrically opposed changes, strengthening and weakening, during the functional condition of an altered nerve section.—W. Reitz (Chicago).

3166. Wassiliew, L. L., & Poderni, W. A. Die variations-statistische Gesetzmässigkeit der Haupt-Nervengliederscheinungen. (Variation-statistical laws underlying the main nerve muscle phenomena.) *Pflüg. Arch. ges. Physiol.*, 1934, 235, 194-199.—The writers demonstrate that all empirical curves pertaining to aspects of nerve-muscle phenomena, such as stimulation, electro-tonics, parabiosis (according to Wedensky), alternation current, and the so-called apparent fatigue (according to Scheminzy), which express the functional relation between the intensity or the duration of the stimulating agent and the magnitude of the physiological effect, are essentially of the same S-shaped character. Furthermore, the writers endeavor to show that all these empirical S-shaped curves fit an integral curve of the cumulative frequency type. As an example they mention the dissociation curve $y = k/e^{px} + k$, in which k and p are constants and e is the base of Napier's logarithms.—W. Reitz (Chicago).

3167. Wirtanen, R. E., & Olmsted, J. M. D. Taste fibers and the fifth nerve. *J. comp. Neurol.*, 1934, 60, 1-3.—Division of the vidian nerve in the cat and removal of the gasserian ganglion in the dog without finding degeneration of the taste buds on the anterior part of the tongue lead to the conclusion that taste fibers do not pass to the brain stem by way of the fifth nerve.—C. P. Stone (Stanford).

3168. Wyss, O. A. M. Selektive Reizung der herzhemmenden und herzfördernden Komponente im Vagosympathicus des Frosches. (Selective stimulation of the heart-inhibiting and heart-accelerating

components in the vagus sympathicus of the frog.) *Pflüg. Arch. ges. Physiol.*, 1934, 234, 574-588.—In stimulating the trunk of the vagus sympathicus of frogs by the method of temporally selected stimulation in the form of a delayed condenser discharge, the writer succeeds: (1) by a proper choice of intensity and timing of the various stimuli in exciting selectively the heart-retarding vagus fibers and the accelerans fibers on account of their differential time excitation; (2) by proper choice of stimulation frequency and stimulation number in facilitating the selective response of the two antagonistic mechanisms on account of their differential summation property. For heart-retarding vagus fibers the more adequate stimulation is a relatively quick current jolt, and for accelerans fibers a relatively slow current jolt. Accelerans fibers have a greater summation property than vagus fibers. Optimal conditions for a selective stimulation of the two components of the vagus sympathicus are as follows: a few stimuli, which succeed each other at short intervals and subside quickly, produce a pure retardation effect, while numerous stimuli, succeeding each other at long intervals and subsiding slowly, produce a pure accelerans effect.—W. Reitz (Chicago).

[See also abstracts 3084, 3093, 3099, 3107, 3210, 3221, 3222, 3230, 3234, 3244, 3310.]

MOTOR PHENOMENA AND ACTION

3169. Abraham, P. Sur la dissymétrie latérale de la figure humaine. (Lateral asymmetry of the human face.) *J. Psychol. norm. path.*, 1934, 31, 587-596.—A review of the results of studies on lateral asymmetry of facial expression. In an experimental situation the use of photography increases the chances of objectivity in all studies of facial asymmetry. Two methods are available. The author uses one wherein many photographs of one subject are taken with lighting effects and position held constant. Two groups of facts are available, one concerning structure and the other expression. Physiologists regard the center of language to be in the left cerebral hemisphere. Mental activity can be regarded as a social manifestation and as an inner development. By analogy, education can be viewed two ways, as either inculcating skills or developing character. Each viewpoint is important, but both should coexist. Subsequent discussion of the above experimental problem emphasizes various cautions that should be heeded in experiments with left- or right-handed subjects.—P. S. de Q. Cabot (Harvard).

3170. Andrejew, S. W., & Nikoljskaja, M. J. Die motorische Funktion der oberen Dünndarmabschnitte bei anhaltendem Hungern. (The motor function of the upper sections of the small intestines during continuous hunger.) *Pflüg. Arch. ges. Physiol.*, 1934, 234, 756-760.—The motor activity of upper sections of the jejunum, observed in dogs with the Thiry-Vella fistula, consists (with empty stomach, under conditions of mixed food) in the various dogs, of regular, successive, strong (15-25 mm.), medium (5-15 mm.), and weak (up to 5 mm.) contractions. During a

long, continuous hunger, with a supply of water, the excitability and tonicity of the intestinal wall slowly increase. This is distinctly noticeable from the 5th to the 6th day of hunger and expresses itself in a larger number of medium or larger contractions and in a smaller number of weaker ones. The rhythm of contraction increases by 20-30%. After cessation of the hunger a change of the motor function of the intestines occurs: during the first one to four days of feeding tonicity and excitability are reduced and small contractions are observed, but they may also be lacking. During the 5th to the 10th day of feeding the motor function returns to the behavior existing before the hunger experiment.—W. Reitz (Chicago).

3171. Barker, L. F. Constitution and internal medicine. *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 81-90.—A summary is given of the basic program of constitution study with particular reference to Kretschmer's formulation. The relation of constitution to disease is elucidated with examples of tuberculous infection, essential hypertension and gastric disorders.—D. G. Marquis (Yale).

3172. Cate, J. ten. Die Pupillenerweiterungen auf akustische Reize und die Grosshirnrinde. (The cerebral cortex and pupillary dilation to auditory stimuli.) *Arch. néerl. Physiol.*, 1934, 19, 408-416.—Weak acoustic stimuli in a quiet room give rise to pupillary dilation in the cat; the quieter the room, the weaker the acoustic stimuli required. Extirpation of either the two motor zones or the two optic zones does not abolish the pupillary reactions, and such minor disturbances as appeared could be ascribed to diaschisis. Extirpation of the two auditory zones gave rise to more extensive and more persistent pupillary disturbances, which could not be attributed to diaschisis alone. It is assumed, therefore, that the cortical auditory centers exercise some influence upon the dilation of the pupils.—C. P. Stone (Stanford).

3173. Cate, J. ten. Die Pupillenverengerung, als bedingter Reflex auf akustische Reize und ihre Beziehung zu der Grosshirnrinde. (Contraction of the pupil as a conditioned reflex to auditory stimuli and its relation to the cerebral cortex.) *Arch. néerl. Physiol.*, 1934, 19, 417-425.—Conditioned pupillary contractions are set up more rapidly in the cat to weak than to strong acoustic stimuli. In cats deprived of either the motor or the auditory zones conditioned pupillary contractions could not be built up. On the other hand, there was no difficulty in forming these conditioned pupillary reactions after extirpation of the facial zones of both sides. It is concluded that the formation of conditioned pupillary contractions to auditory stimuli is dependent upon the cortical auditory centers and the cortical motor centers of the eyes.—C. P. Stone (Stanford).

3174. Cattell, R. C. On the measurement of "perseveration." *Brit. J. educ. Psychol.*, 1935, 5, 76-92.—Designing tests to approach problems of the nature of perseveration involved trying out new forms to decide between current conceptions of "p," particularly "alternation" and "creative effort," attempting

to eliminate correlations with intelligence, improving time of testing, standardizing effort and quality of performance, producing a test with more mechanical scoring, and confirming that motor tests of "p" have not a factor in common differentiating them from other tests of "p." From trials with adults and with both boys and girls aged 10 and 14, the following conclusions were drawn: "p" can be measured with adults quite satisfactorily by tests of pure alternating type and by means of a machine, the "perseverameter"; there is little to choose between alternation and creative types for adults, but creative effort tests are better for children; correlation between "p" and "g" can be eliminated down to the 10-year level; tests of 1½ to 2 minutes are best for adults, but longer is needed for children; "p" score declines with age to adolescence, then rises to a stable adult level, with a further rise in old age; norms for a particular test are valid only for the first application; there are no marked sex differences for adults; boys score higher than girls; scores increase with fatigue.—K. M. Cowdery (Stanford).

3175. Cook, T. W. Studies in cross education. IV. Permanence of transfer. *J. exp. Psychol.*, 1935, 18, 255-266.—Transfer from hand to hand after 10 and 30 trials practice in mirror-tracing a star-shaped maze, and after 30 trials practice with an irregular finger maze (S's blindfolded) was still effective at the end of 10 and 30 transfer trials, respectively. Transfer from 10 trials practice with the finger maze, while showing some evidence of permanence of transfer, was so variable that no quantitative deductions could be made. Individual records indicated both positive and negative transfer. It is concluded that positive transfer is not maximal until the learned pattern has attained a certain degree of stability.—E. H. Kemp (Clark).

3176. Darrow, C. W. The significance of skin resistance in the light of its relation to the amount of perspiration (preliminary note). *J. gen. Psychol.*, 1934, 11, 451-452.—It was found that perspiration tends to vary as the reciprocal of resistance.—H. Cason (Wisconsin).

3177. Eames, T. The anatomical basis of lateral dominance anomalies. *Amer. J. Orthopsychiat.*, 1934, 4, 524-528.—The author summarizes his article as follows: "1. The frequency of lateral dominance anomalies is not much greater among poor readers than among unselected children. 2. The difference in frequency is sufficient to warrant a consideration of lateral dominance anomalies as a type of etiological factor in reading disability. 3. The brain center controlling manual dominance is believed to be located in the prefrontal gyrus on the side opposite to the dominant hand. 4. The ocular dominance control center is believed to be located in the thalamus at or near the termination of the decussating fibres from the retina of the dominant eye. 5. Reading difficulties arising from lateral dominance anomalies are regarded as being due to: a. Lengthened reflex paths. b. Adventitious reflexes of an inhibitory nature. c. Functional development of the visual memory center on the right

side of the brain. d. Simultaneous stimulation of the visual memory center and the corresponding anatomical area on the opposite side of the brain."—J. J. Carlson (Aurora-on-Cayuga, N. Y.)

3178. Elliott, M. H. Drive and the characteristics of driven behavior. *Psychol. Rev.*, 1935, 42, 205-213.—Drive is a fruitful concept which, however, must be given objective definition. It is "the total of internal changes produced in an organism by some kind of deprivation." A list of the characteristics of driven behavior include (1) activity, (2) rhythm, (3) facilitation, (4) inhibition, (5) sensitivity, (6) variability, and (7) modifiability. The measurement of the strength of drives is made difficult because of their extensive and varied effects on behavior and the consequent lack of a constant behavioral measure of strength.—A. G. Bills (Chicago).

3179. Fenn, W. O., & Garvey, P. H. The measurement of the elasticity and viscosity of skeletal muscle in normal and pathological cases; a study of so-called "muscle tonus." *J. clin. Invest.*, 1934, 13, 383-397.—(Biol. Abstr. IX: 4931).

3180. Frank, J. D. The influence of the level of performance in one task on the level of aspiration in another. *J. exp. Psychol.*, 1935, 18, 159-171.—Changes in the level of performance in one task affect the height of the first level of aspiration in another. The extent of this effect depends on the degree to which the two tasks are objectively similar. Changes in the level of performance in one task affect the average height of the remaining levels of aspiration in another in some cases. This effect seems to be independent of the degree of objective similarity of the tasks, and to depend rather on individual factors. There is no evidence that these two types of effect are related. The results obtained are shown to accord well with the hypothesis that the level of aspiration represents on the one hand an objective estimate of the future levels of performance on the basis of past levels of performance, and on the other a means of protecting the ego-level when this is involved in the task.—E. H. Kemp (Clark).

3181. Freeman, G. L. Diurnal variations in performance and energy expenditure. Chicago: Northwestern Univ. Press, 1935. Pp. 27.—A series of experiments was performed to determine the influence of various factors upon variations in performance and energy expenditure during the day. Energy expenditure was measured partly in terms of muscular tension, but mainly in terms of insensible weight loss. Muscular tension was measured by means of special apparatus which measured tendon deformation in absolute units. Insensible weight loss was measured with a Kilo Sauter balance, accurate to .1 gram. The performance tasks used were finger oscillation and continuous mental addition. "It would seem that variations in performance and energy expenditure which correspond with the time of day are resultants of a complex polygon of forces, including food ingestion and sleep, effort and incentive, exercise and fatigue. The way in which these factors are arranged in relationship to the periods of work surveyed deter-

mines the form of variations which is exhibited. The wide discrepancy between diurnal variations of the same and different individuals is fundamentally due to a lack of control of the responsible factors. . . . The time and amount of sleep, the time and amount of food ingestion, the time and amount of strenuous exercise, and the character of incentives all are important. . . . It is possible to bring individuals, no matter what their habitual pattern of activity, under an experimental regimen which will produce similar variations in all. . . . There is little evidence of periodicity in work if we mean that performance is conditioned by some inherent 'periodicity factor.'"—B. Casper (New York City).

3182. Gellhorn, E. The influence of parathormone on the neuromuscular system: an experimental analysis. *Amer. J. Physiol.*, 1935, 111, 466-476.—The hind legs of pithed frogs were perfused with control Ringer-phosphate solutions and with experimental solutions containing parathormone. The pH was kept constant at 7.2, the nerves were stimulated with rhythmic condensor discharges, and gastrocnemius contractions were recorded isotonicity. It was found that parathormone increased the height of contraction up to 400%, that the effect was reversible, and that inactivation of parathormone by boiling with 10% HCl or ethyl alcohol destroyed both the blood calcium-raising principle and the muscular effect. The subliminal parathormone increased the calcium effect on striated muscle but not on heart muscle. It is suggested that parathormone increases the number of end-plates functioning and that the calcium effect and the parathormone effect summate due to action on the same structure at the neuromuscular junction.—T. W. Forbes (N. Y. Psychiatric Institute).

3183. Gilbert, R. W., & Crafts, L. W. The effect of signal for error upon learning and retention. *J. exp. Psychol.*, 1935, 18, 121-132.—The aims of the study were to determine the effect upon the learning and retention of a stylus maze of giving an auditory signal for error during the learning, and also to compare these results with those of a previous study in which an electric shock had been similarly used. In the experimental group every contact of the stylus with the end of a cul-de-sac produced the auditory signal. After an interval of one week the maze was relearned, but without sound for either the control or experimental group. In learning the experimental group was superior to the control according to the criteria of trials, errors and time. In retention it was equal in per cent saved, but superior in recall, in relearning, and in per cent saved per trial, error and second of the original learning. Its superiority in learning is attributed to the guidance or informative value of the signal, together with the punishment and incentive functions which it probably possessed. Comparison of the auditory signal and electric shock groups showed the value of the sound and shock for both learning and retention to have been approximately equal.—H. W. Karn (Clark).

3184. Goetz, R. H. Der Fingerplethysmograph als Mittel zur Untersuchung der Regulationsmechan-

ismen in peripheren Gefäßgebieten. (The finger plethysmograph as a means of investigating regulation mechanisms in peripheral vascular regions.) *Pflüg. Arch. ges. Physiol.*, 1935, 235, 271-287.—A method and apparatus are presented which permit the recording of volume fluctuations of the human finger with considerable validity and reliability. A number of applications demonstrate the usability of the new technique.—*W. Reitz* (Chicago).

3185. Goldzieher, M. A. Biochemical aspects of constitution. *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 122-137.—Recent advances in biochemistry and endocrinology are reviewed. The facts tend to show that the development of the human body and its characteristic individual appearance and activity are closely linked with certain chemical peculiarities. The peculiarities are not merely incidental, and their association with certain types is so consistent that it is possible at times to predict the type from the chemical analysis of the blood, and conversely and even more often, the chemical characteristics of the body fluids from the type of person.—*D. G. Marquis* (Yale).

3186. Hazard, C. A genetic study of reflex conduction rate. *Proc. Ia Acad. Sci.*, 1933, 40, 192.—Reflex conduction rates for the patellar tendon reflex by the action current technique were obtained on individuals varying in age from nine days to four years. Conduction rate depends primarily upon the maturation of the peripheral arc.—*B. Wellman* (Iowa).

3187. Hoagland, H. Pacemakers in relation to aspects of behavior. New York: Macmillan, 1935. Pp. 136. \$3.00.—The view is presented that much of behavior depends upon continuous chemical events in cells and that the external environment acts by changing the relative velocities of these underlying events rather than by initiating new processes. This principle is illustrated by experimental considerations of the behavior of plant and animal cell systems. It is shown that rhythmic behavior of organisms, including the repetitive discharge of nerve impulses, is dependent on steady chemical states which may be controlled by master reactions determining overt behavior. An analysis of the time sense in man is used to show how these ideas may be applied to the behavior of the central nervous system. The author also presents a new physicochemical hypothesis to account for the adaptation or "peripheral inhibition" of mechanoreceptors. The pacemaker concept is incidentally illustrated by a detailed analysis of the activity of the lateral-line receptor system of fishes.—*W. S. Hunter* (Clark).

3188. Hoagland, H., & Perkins, C. T. Some temperature characteristics in man. *J. gen. Physiol.*, 1935, 18, 399-408.— $\mu = 29,400$ for the human heart-beat over a temperature range of about 4.7° C. This value is different from one obtained in experiments on the estimation of time intervals of short durations. Thus the estimation of time is controlled by a chemical master reaction which is independent of the pulse rhythm.—*C. H. Graham* (Clark).

3189. Hudgins, C. V. Steckle and Renshaw on the conditioned iridic reflex: a discussion. *J. gen. Psychol.*, 1935, 12, 208-214.—The author states that Steckle and Renshaw (*J. gen. Psychol.*, 1934, 11, 3-23) did not repeat his experiment (*J. gen. Psychol.*, 1933, 8, 3-51).—*H. Cason* (Wisconsin).

3190. Jelliffe, S. E. Historical notes on constitution and individuality. *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 1-20.—The concept of constitution is traced through the early medical writings, with particular reference to the trends in the study of heredity, hormones, and disease.—*D. G. Marquis* (Yale).

3191. Landis, C. The effect of the injection of adrenalin on complex muscular activity. *J. comp. Psychol.*, 1935, 19, 113-117.—The speed and accuracy of dart throwing were not significantly affected by injection of 1 c.c. of adrenalin. Seven practiced subjects were used. Bibliography.—*N. L. Munn* (Pittsburgh).

3192. Lauer, A. R. Personal "tempo" or rhythm. *Proc. Ia Acad. Sci.*, 1933, 40, 192-193.—Typical samplings of voluntary and involuntary response rates were compared. There was little relationship between specific response rates. Any tendency for bodily tempos to vary together, suggesting a speed factor, would seem to hold only for habituated response if at all.—*B. Wellman* (Iowa).

3193. Lorente de N6, R. Observations on nystagmus. *Acta oto-laryng.*, Stockh., 1935, 21, 416-437.—Nystagmus of the horizontal muscles, rectus externus and rectus internus, of the eye of the rabbit was produced by caloric stimulation of the labyrinth, by unilateral labyrinth extirpation, or by lesions in the nervous system. Isometric myographs were used for recording the mechanical contractions, and amplifiers and galvanometers were used for recording the action potentials developed during the contraction. The maximal regular frequency of nystagmus is 4 to 5 strokes per second. The innervation of the eye muscles is the same as for other muscles. The contractions occasionally are as frequent as 200 per second, but contractions for more than half that number cannot be maintained. During nystagmus, the antagonistic muscles have asynchronous turning points. This indicates that there is a delay somewhere in the path toward the motoneurons. Bibliography and 7 plates.—*M. B. Mitchell* (New Hampshire State Hospital).

3194. Marinesco, G., & Kreindler, A. Des réflexes conditionnels. III. Applications des réflexes conditionnels à certains problèmes cliniques. (Conditioned reflexes. III. Application to certain clinical problems.) *J. Psychol. norm. path.*, 1934, 31, 722-791.—An application of the conditioned-reflex technique to the study of clinical problems. Pavlov has been able to detect temperament types among dogs on the basis of threshold susceptibility for conditioned reflexes. Osipowa has likewise observed such types among children. The present authors have followed Kretschmer's typological classification and have noted corresponding differential conditioned-reflex

responses, together with the particular neural mechanisms involved. Age, as an important psychosomatic factor, also modifies the production and inhibition of the reflexes. Attention is given to Pavlov's studies in the production of neuroses among animals. The close relation between conditioned reflexes and the plasticity of instincts is noted and the importance of Kappers' law of neurobiotaxis stressed. The reflexes of different psychotic patients are observed as well as those of persons suffering from such language defects as aphasia and stammering. The authors extol the value of the findings of Pavlov and his school for our increased knowledge of cerebral physiological processes, with a proportionately increased insight into the problems of psychiatry, psychology and neural pathology.—*P. S. de Q. Cabot* (Harvard).

3195. Mistschenko, M. N. Ueber die mimische Gesichtsmotorik des Blinden. (On mimetic motility of the face in the blind.) *Folia neuro-esthoniae*, 1933, 13, 24-43.—The author used Kwint's scale for evaluating mimetic development in 61 blind (11 congenital) subjects, aged 4-18 years. Between the ages of 4 and 7, 23% of the blind children were advanced, 33% normal, and 44% retarded; between 8 and 12, the proportions were 9%, 13%, 78%; above the age of 13, all were retarded. In the congenitally blind, 92% were retarded; in those who became blind the first year, 82%; and in those who became blind between 4 and 7, 74%. The persistence of a crude luminous sensitivity without vision of forms had little effect: in the totally blind 84% were retarded; in those showing a certain luminous vision of one eye, 93%; and in those showing this crude vision in both eyes, 72%. The examination of constitutional types (pyknic, athletic, asthenic and mixed) yielded nothing noteworthy.—(Courtesy *Année psychol.*)

3196. Patterson, M. Synchronization of action current waves from homologous muscle groups during reflex activity. *Proc. 1a Acad. Sci.*, 1933, 40, 191.—Action currents were practically the same for each member of homologous pairs of muscles with respect to frequency, intensity and wave form. Homologous muscles have a common integrating center in reflex activity; neither the motor nerve nor the muscle masses alter the discharge from this common integrating nerve level.—*B. Wellman* (Iowa).

3197. Pavlov, I. P. Die Physiologie der höchsten Nerventätigkeit. (The physiology of the highest nervous activity.) *C. R. Cong. int. Physiol.*, 1932, Pp. 18.—The central physiological processes in the normal activity of cerebral phenomena are characterized by the conditioned reflex. The conditioning of the higher activity of the cortex is assured by the activities (nutritive, protective, etc.) of the sub-cortical centers. The cerebral hemispheres assure an extension of the unconditioned reflexes by conditioned reflexes, reacting to stimuli and permitting the organism to live with more security in its environment. Originating in a simultaneity between indifferent stimuli and absolute reflex reaction, the conditioned

reflex vanishes, at least momentarily, when repetition of the simultaneity ceases; if the stimulus is repeated alone or associated with other manifestations, the reflex is destroyed. A differentiation, an analysis of the exterior world, is produced by these mechanisms; and with the combined processes of analysis and synthesis an elementary concrete thought is developed. The work closes with a résumé of the author's conceptions on the processes and laws of this psychic or higher nervous activity.—(Courtesy *Année psychol.*)

3198. Piéron, H. On the "factors influencing the latent time of the patellar reflex." *J. exp. Psychol.*, 1935, 18, 155-157.—In a study on "Factors Influencing the Latent Time of the Patellar Reflex," (*J. exp. Psychol.*, 1934, 17, 556-573) W. Varnum, pointing to the shortening effect of the "Jendrassiks Handgriff" and in a general way of the latent time of the reflex, states: "It seems strange that this interesting parallel to the 'Jendrassiks Handgriff' should have waited so long for its experimental investigation." In order to show that the observation of the shortening effect of the "Jendrassiks Handgriff" has not waited to be made until 1934, the author reproduces lines of a report which he made in 1917, in which he pointed out that "an increase of patellar reflectivity calls forth, for a constant intensity of stimulation, a shortening of the latent time, and more particularly of the 'Jendrassiks Handgriff,' the phenomenon being very general in its character."—*H. W. Karn* (Clark).

3199. Riddle, O., Bates, R. W., & Lahr, E. L. Prolactin induces broodiness in fowl. *Amer. J. Physiol.*, 1935, 111, 352-360.—Prolactin injected intra-muscularly caused premature broodiness in hens. Persistent broodiness occurred only when the dosage was such as to repress the ovary and stop the growth and production of ova. A partial broody response was obtained in two mature roosters. It is suggested that a known hormone has thus been identified as an essential element in the widespread, variously modified and species-preserving incubation instinct.—*T. W. Forbes* (N. Y. Psychiatric Institute).

3200. Ryans, D. G. A preliminary investigation of the effects of mental distraction upon muscular fatigue. *J. exp. Psychol.*, 1935, 18, 148-151.—Evidence is presented which indicates that mental activity, such as is involved in reading, tends to reduce organic fatigue effects in some individuals, in so far as such effects may be indicated by work decrement in ergograph operation. The results are attributed to withdrawal of attention from the cumulative feeling of tiredness.—*H. W. Karn* (Clark).

3201. Schoen, Z. J., & Scofield, C. F. A study of the relative neuromuscular efficiency of the dominant and non-dominant eye in binocular vision. *J. gen. Psychol.*, 1935, 12, 156-181.—The diplopia threshold—the extent to which the eye may overcome prismatic stress before binocular single vision is disrupted—was found to be greater for the non-dominant eye than for the dominant. The difference was small, barely larger than the unit used, but it was consistent. The duration of post-duction diplopia—the time required

for each eye to establish single binocular vision following its disruption by the removal of a surmounted prism—was significantly less for the non-dominant than for the dominant eye. A positive relationship between the two measures of neuromuscular efficiency was found for four S's who served in both parts of the experiment. In the duration of post-duction diplopia the average difference between the two eyes of left-eyed dextrals was but 29.9 σ , as compared with a difference of 90.6 σ for all S's. Evidences of practice and fatigue were observed. These factors must be considered as inherent parts of the neuromuscular efficiency of the two eyes. The results support the belief that in ophthalmic practice when weak prisms are indicated for constant wear they should be prescribed for the non-dominant eye.—*H. Cason* (Wisconsin).

3202. Skinner, B. F. Two types of conditioned reflex and a pseudo-type. *J. gen. Psychol.*, 1935, 12, 66-77.—The author describes several different kinds of conditioned responses and compares them with each other.—*H. Cason* (Wisconsin).

3203. Swerdloff, S. M. Zur Frage der tonischen Kontraktion des Skelettmuskels. (On the problem of tonic contraction of skeletal muscle.) *Pflüg. Arch. ges. Physiol.*, 1934, 235, 141-146.—The tonic contraction of the muscle of a preparation of gastrocnemius and ischiadicus of frogs, produced by a tetanization of the nerve under certain conditions, may be stimulated or inhibited by strong separate nerve impulses, depending upon the developmental phase of the contraction. The effect upon the muscle of strong nerve impulses is otherwise diminished by the tonic conditions of the muscle. The tonic reaction is a function of the effect of diminished, and possibly also qualitatively changed, nerve impulses upon fibers of skeletal muscle. The same fiber of skeletal muscle can be stimulated to carry out qualitatively different reactions (tonic and tetanic); this is simply a matter of the characteristics of the nerve impulse which traverses the muscle along the same nerve fiber.—*W. Reitz* (Chicago).

3204. Switzer, St. C. A. The influence of caffeine upon "inhibition of delay." *J. comp. Psychol.*, 1935, 19, 155-175.—The author wished to determine how a delayed conditioned reaction is modified by a moderate dose (5 grains) of caffeine citrate. Galvanic skin and respiratory responses of human subjects were conditioned to light. Electric shock was the unconditioned stimulus. Doses of caffeine and milk sugar were given in random order. The data "substantiate the view that the latent period of delayed conditioned reactions is shortened under the influence of caffeine." The unconditioned as well as the conditioned reactions were augmented by caffeine. After the first few days of training, a 24-hour rest did not produce a marked decrease in latency of the galvanic reaction. "The measures of change in respiratory activity on the first and fifth days of training offer little evidence in support of the thesis that the latent period of delayed conditioned reactions is a true interval of generalized inhibition." Bibliography.—*N. L. Munn* (Pittsburgh).

3205. Switzer, St. C. A. The effect of caffeine on experimental extinction of conditioned reactions. *J. gen. Psychol.*, 1935, 12, 78-92.—Twenty S's were tested for the effect of a 5-grain dose of caffeine citrate on experimental extinction of conditioned respiratory and conditioned galvanic skin reactions. In the conditioned galvanic reactions, and perhaps also in the conditioned respiratory responses, the effect of the drug was to retard the process of experimental extinction.—*H. Cason* (Wisconsin).

3206. Taylor, J. H. The effect of increasing speed of stimulation on an organized task. *J. gen. Psychol.*, 1935, 12, 132-143.—S's were trained in tasks involving the discrimination of five light intensities, three auditory stimuli, and two peripheral-light stimuli. When the speed of stimulation was increased the efficiency of the three tasks decreased, and the decrease in behavior seemed to be due to a positive factor of disorganization induced by failure to make adequate responses. The decrease in efficiency was accompanied by an increase in muscular tension.—*H. Cason* (Wisconsin).

3207. Telford, C. W., & Spangler, H. Training effects in motor skills. *J. exp. Psychol.*, 1935, 18, 141-147.—Evidence is presented which shows a consistent motor superiority of a group of pianists over a comparable group without piano training. There was also found a sex difference in favor of the males. The differences show themselves in speed, accuracy, and steadiness of arm and finger movements. The authors believe that the most plausible explanation of most of the differences is on the basis of practice effects both direct and transferred. Piano training seems to have developed a motor ability which affects speed, accuracy and steadiness of arm movements. It is pointed out that the correlations between these different exercises is not sufficiently high to indicate the existence of a general motor function. The correlation between speed of tapping and scores on the tracing board is $.13 \pm .06$, between tapping and steadiness of movement $.43 \pm .05$, and between steadiness and scores on tracing board $.24 \pm .06$.—*H. W. Karn* (Clark).

3208. Timme, W. Endocrine aspects of constitution. *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 91-121.—A summary is presented of the constitutional and clinical features of dysfunction of the thyroid, pituitary, parathyroid, gonads, and adrenal. Special attention is given the hypoplastic group, characterized by hypoplastic cardiovascular system, small and inefficient pituitary gland, small and inadequate suprarenal glands, insufficiency of thyroid tissue, small and hypoplastic genitalia. Many of the symptoms arise as bodily compensatory efforts. These hypoplastic cases have a constitutional picture; "they fill our files under the various captions of hysteria, neurasthenia, psychoneurosis, constitutional inferiority, psychasthenia and many more that will be coined in the hereafter."—*D. G. Marquis* (Yale).

3209. Van Riper, C. A study of handedness. *Proc. Ia Acad. Sci.*, 1933, 40, 192.—Simultaneous writing of both hands on a variable angle board

showed differences between right and left handed groups, the non-dominant hand producing mirror script or mirror patterning. The amount of laterality was judged by the angle at which mirroring occurred.—*B. Wellman* (Iowa).

3210. Walidow, I. *Zur Analyse der Ermüdung im Nervenmuskelpräparat.* (On the analysis of fatigue in a nerve-muscle preparation.) *Pflüg. Arch. ges. Physiol.*, 1934, 235, 147-155.—During fatigue of the muscle-nerve preparation, the nerve end-organs are put into a condition of "local fatigue." This fatigue can be eliminated through the effect of Ca, just as in Scheminzy's experiments "local fatigue" of the muscle is eliminated under the cathode of the stimulating current through the effect of anelectrotonus.—*W. Reitz* (Chicago).

3211. Wentscher, E. *Wandlungen der Willenspsychologie.* (Transformations in the psychology of the will.) *Arch. ges. Psychol.*, 1934, 90, 561-563.—A brief résumé and comparison of theories of will and its relation to instinct. The author believes that the more recent experimental evidence points to the necessity of returning to a non-mechanistic interpretation such as was proposed by Lotze and Sigwart.—*E. L. Kelly* (Connecticut State).

3212. Williams, D. O. *Gregariousness: a critical examination of the concept of the gregarious instinct.* *Aust. J. Psychol. Phil.*, 1933, 11, 50-68.—From a consideration of a herd instinct "as working in one or both of two ways," (1) "in bringing members of a species together," and (2) "in organising the society thus formed," the author shows that the "impetus (for the social habit) is derived, not from a herd instinct, but from the more primitive instinctive urges of nutrition, reproduction and self-protection."—*R. H. Brown* (Clark).

3213. Wolfe, D. L. *The relative efficiency of constant and varied stimulation during learning.* *J. comp. Psychol.*, 1935, 19, 5-27.—Different types of mazes, variable in shape or length of alley, size, etc., were used with human subjects to determine the relative efficiency of learning under constant and varied conditions. The results may be summarized as follows: (1) The effect of variation differs with the element of the situation varied. (2) Learning becomes less efficient as the degree of variation is increased, the relation between these variables being S-shaped. (3) The subject's recognition of constant factors leads to more rapid learning. (4) Failure of the subject to recognize variable factors is also correlated with rapid learning. (5) A linear relation showing increasing superiority of verbal learning methods (as against motor methods) with the amount of stimulus variation was noted. Bibliography.—*N. L. Munn* (Pittsburgh).

3214. Young, A. L. *The comparative efficiency of varied constant methods in sensorimotor learning.* *J. exp. Psychol.*, 1935, 18, 133-140.—The activities engaged in in this study were ball tossing, quoit pitching, and "gowf." In the first phase of the investigation 161 subjects were employed in the different activities in undirected learning. One group employed varied

methods for one form of sensorimotor activity, while the other group used a constant procedure for the same type of activity. Later the former group practiced another type of activity by the constant method, while the latter group employed a varied procedure. The findings indicate a reliably significant superiority of about 30% for constant methods over varied methods. In the second phase of the investigation 20 subjects using an undirected method or varied procedures in "gowf" were compared to an equated group employing a directed constant method. The directed method appeared to be significantly superior to the undirected method by more than 35% in flipping efficiency and 25% in economy of time.—*H. W. Karn* (Clark).

3215. Zaganczyk, A. *L'effet de la récompense différée sur l'apprentissage.* (The effect of delayed reward upon learning.) *Année psychol.*, 1934, 34, 114-158.—In the first experiment the subjects, blindfolded, traced lines 9 to 18 cm. long. The result was announced to the subject. The results on the line experiment seem to indicate that a reward or punishment separated from the action to which it appertained by a simple sign, a short interval of time, or a mental task, did not affect the learning. When the reward or punishment is delayed by a more complicated task or a longer interval of time, the learning seems to profit. The subjects were also given words, which were read with numbers associated with them. The task was to respond with the first word that came to mind as the number was read. The examiner said "good" or "bad" and passed to the next item. The learning of connections takes place by logical bonds, not mechanical memorization. The action of connections is reinforced by the introduction of other operations. Delay of reward is unfavorable to learning by means of logical connections, which reinforce the learning by the sole action of the effect.—*J. Steinberg* (Columbia).

[See also abstracts 3066, 3072, 3087, 3089, 3091, 3120, 3139, 3142, 3149, 3155, 3166, 3229, 3231, 3232, 3241, 3248, 3275, 3317, 3421, 3439, 3484, 3485.]

PLANT AND ANIMAL BEHAVIOR

3216. Bethe, A., & Thorner, H. *Koordinationsstudien an vielbeinigen Tieren (Myriapoden).* (Studies of coordination in animals with multiple legs—myriapods.) *Pflüg. Arch. ges. Physiol.*, 1933, 232, 409-431.—Analysis of cinematographic records of the progression of a myriapod, both under normal conditions and after several interventions. The bilateral and symmetrical amputation of a group of legs in the median region induces a falling out of phase between the movements of the anterior and posterior parts and a greater frequency in the movements of the legs situated behind the cut part. Unilateral amputation often has the same effect, though less marked; the symmetrical legs always keep the same phase when no obstacle is interposed. In general, the tendency to maintain coordination between the right and the left is stronger than that between the

front and the back. The section of a part of the body produces more movements of the extremities; this is due to a shortening of the nervous areas which have to be crossed. When obstacles are introduced in the extent of the animal, there ensues a falling out of phase in the leg movements and changes in the length of the contraction waves, in the sense of adaptation to new conditions. Coordination is not a central, but a global phenomenon; the modalities change according to the circumstances.—(Courtesy *Année psychol.*)

3217. Buytendijk, F. J. J., & Fischel, W. *Über die Reaktionen des Hundes auf menschliche Wörter.* (On reactions of a dog to human words.) *Arch. néerl. Physiol.*, 1934, 19, 1-19.—A dog was trained to step from one chair to another at the command "Spring" and to jump to the floor and run to its mistress at the word "Af." When in critical experiments words coinciding with the training words only in certain sounds were spoken, confusion arose. It was most frequent when the changes were at the beginning rather than at some other part of the word. Slight confusion arose when the mistress was removed from the room or when a stranger gave the commands. There was greater confusion when the commands were given through a loud-speaker.—C. P. Stone (Stanford).

3218. Campbell, A. A. Community of function in the performance of rats on alley mazes and the Maier reasoning apparatus. *J. comp. Psychol.*, 1935, 19, 69-76.—The r between errors on the Warden U and Stone multiple-T maze was $.55 \pm .09$, while that between errors on either of these mazes and the Maier apparatus was negative, but insignificantly so. These results are believed to support Maier's contention that the typical alley maze measures a different function from that of his reasoning situation. Bibliography.—N. L. Munn (Pittsburgh).

3219. Carmichael, L. An experimental study in the prenatal guinea-pig of the origin and development of reflexes and patterns of behavior in relation to the stimulation of specific receptor areas during the period of active fetal life. *Genet. Psychol. Monogr.*, 1934, 16, 338-491.—The paper reports the results obtained by use of a chart of over 100 receptor zones and moving-picture records of 178 guinea-pig fetuses ranging from 27 to 67 post-copulation days in age. Large group muscle responses appeared first and appeared "spontaneously." Later "simple" reflex responses were elicited. Light, sound, temperature, pain, labyrinthine, and pressure stimuli all produced response. In the later fetuses "higher brain centers influence responses of the sort predominantly mediated at the spinal level." "While strictly maintaining the scientific or mechanistic point of view it is possible for the external observer to recognize many of the responses of the fetus as adaptive." "The present study does not confirm in detail the specific laws of development, alleging that development is in all respects cephalo-caudal, proximodistal, or from fundamental to accessory." The bibliography contains 106 references.—F. M. Teagarden (Pittsburgh).

3220. Castle, E. S., & Honeyman, A. J. M. The light growth response and the growth system of *Phycomyces*. *J. gen. Physiol.*, 1935, 18, 385-397.—The Roscoe-Bunsen law holds for the light growth response system of *Phycomyces* for short exposure times. For longer exposures the response depends on intensity alone. The long-response latency of the cell is discussed in terms of cellular structural determining conditions. The total elongation of the cell over a period of 1 to 2 hours is independent of flashes of light or temporary darkening. Equilibrium is attained in the light system in one-third the time it is attained in the growth system.—C. H. Graham (Clark).

3221. Cate, J. ten. *Akustische und optische Reaktionen der Katzen nach teilweisen und totalen Exstirpationen des Neopalliums.* (Acoustic and optic reactions of cats after partial and total extirpations of the neopallium.) *Arch. néerl. Physiol.*, 1934, 19, 191-264.—Restitution of the auditory sense was demonstrated in three cats with complete extirpation of the cortical auditory centers and in one cat with complete extirpation of the neopallium. Also conditioned reactions to an electric bell or a Galton whistle could be built up. In all of the animals the differentiation of acoustic stimuli was very imperfect, and the neopallium seemed to be indispensable for accurate differentiation of pitch and intensity. Cats in which the area striata was destroyed completely lost the visual sense and conditioned responses to optic stimuli could not be set up. Thus it appears that the neopallium is not of the same significance for the perception of optic and acoustic stimuli in cats. The cats' olfactory sense is mediated through the rhinencephalon. Nothing new concerning localization of the gustatory sense was ascertained. Motility which was impaired at the beginning became more or less restored toward the end of the observation period.—C. P. Stone (Stanford).

3222. Dennis, W., & Bolton, C. Producing brain lesions in rats without opening the skull. *Science*, 1935, 81, 297-298.—Lesions of controllable area and extent may be produced in the brains of rats by applying cautery points for definite durations to the surface of the skull. Exposure of the cranial contents to the danger of infection is thus avoided.—E. H. Kemp (Clark).

3223. Dunn, B. M. A comparison of food reward and escape from water in motivating learning in the white rat. *J. comp. Psychol.*, 1935, 19, 107-112.—Two groups of rats, one hungry and running the maze and the other non-hungry and swimming the maze, made similar error scores. The hunger group made slightly smaller time scores than the escape-from-water group. Easier locomotion may be the explanation. Some adaptation to the water, weakening its incentive value, was evidenced by a final increase in time and errors. Bibliography.—N. L. Munn (Pittsburgh).

3224. Enzmann, E. V., & Pincus, G. The extinction of reflexes in spinal mice of different ages as

an indicator of the decline of anaerobiosis. *J. gen. Physiol.*, 1934, 18, 163-169.—In spinal mice the latent period between decapitation and the disappearance of all spinal reflexes decreases regularly with decreasing age. This latent period may be proportional to the capacity for anaerobic metabolism at various ages.—C. H. Graham (Clark).

3225. Ettinger, G. H. The reaction of the cat to electrical currents directed through the heart. *Amer. J. Physiol.*, 1935, 111, 406-415.—25-cycle alternating current was applied for an average duration of 3.3 seconds to the left axilla and the right thigh. The current strength ranged from 40 m.a. (50 volts) to 1740 m.a. (740 volts). Respiration, blood pressure and lead-2 electrocardiograms were taken. Currents below 72 m.a. (75 volts) were never fatal, and only 26% of cases with potentially lethal current were fatal. If ventricular fibrillation persisted beyond 1 minute the result was fatal. No statement of the exact current distribution through the different parts of the body is made.—T. W. Forbes (N. Y. Psychiatric Institute).

3226. Frisch, K. v. Ueber den Sitz des Gehörsinnes bei Fischen. (On the seat of the hearing sense in fish.) *Verh. dtsch. zool. Ges.*, 1931, 99-108.—Résumé of studies carried out under the direction of the author on *Phoxinus laevis*. The author explores the high sounds to which animals still react, by training, after several destructions. The destruction of the lagena and the saccule leads to a suppression of reactions to sounds of frequency below 97-145 d.v. in minnows. But a discrimination of frequencies is still possible for low sounds. The ablation of the swimming bladder destroys the auditory sensitivity.—(Courtesy *Année psychol.*)

3227. Guillaume, P., & Meyerson, I. Recherches sur l'usage de l'instrument chez les singes. III. L'intermédiaire indépendant de l'objet. (Investigations of tool using by monkeys. III. Intermediate agent independent of the object.) *J. Psychol. norm. path.*, 1934, 31, 497-554.—The third of a series of similar experimental investigations with young and old chimpanzees and monkeys. The use of some sort of intermediate agent between the organism and the desired object implies among both men and monkeys a kind of very definite explicit knowledge. Such an agent as a stick cannot be adequately conceived in the same way as is a part of the body, an arm for example. The monkey regards the stick as entirely independent of the organism.—P. S. de Q. Cabot (Harvard).

3228. Heron, W. T. The inheritance of maze learning ability in rats. *J. comp. Psychol.*, 1935, 19, 77-89.—An experiment is outlined in which genetic segregation of a bright and a dull race of rats is being attempted. Data are reported for the first four generations of selectively bred rats. There is evidence that the bright and dull strains are successfully being segregated. This is shown by the distribution of errors for the different generations and by the learning curves for the F4 generation.—N. L. Munn (Pittsburgh).

3229. Hilgard, E. R., & Marquis, D. G. Acquisition, extinction, and retention of conditioned lid responses to light in dogs. *J. comp. Psychol.*, 1935, 19, 29-58.—The corneal reflex was elicited by a puff of air. It was recorded photographically. Although lid responses appeared with the onset of a light stimulus before conditioning had taken place, they had a longer latency than that of responses to a puff of air. During conditioning, the frequency and amplitude of the lid reaction increased, while its latency decreased. Experimental extinction involved, on the other hand, a decreasing frequency and amplitude and an increasing latency. "Because of recovery after extinction, successive brief extinction periods result in less decrement than the same number of trials when massed." Conditioned eyelid reactions were retained for as long as three months. Relearning after long periods required only one-tenth of the original trials. Bibliography.—N. L. Munn (Pittsburgh).

3230. Holst, E. v. Weitere Versuche zum nervösen Mechanismus der Bewegung beim Regenwurm (*Lumbricus terr. L.*) (Further investigations on the nervous mechanism of movement in the earthworm, *Lumbricus terrestris L.*) *Zool. Jb.*, 1933, 53, 67-100.—(*Biol. Abstr.* IX: 4933).

3231. Huizinga, E. Ueber die Funktion des Bogengangapparates bei der Taube. (On the function of semi-circular canals in the pigeon.) *Pflüg. Arch. ges. Physiol.*, 1933, 231, 525-542.—According to results obtained from carefully made canal sections, the six canals can be grouped into three functional systems, viz., two horizontal canals and two vertical crossed systems, each formed from the anterior canal on one side and the posterior on the other. When one functional element from each of two systems is destroyed, the disturbances are slight and there are compensation phenomena. But when two canals of the same system are destroyed, there are marked disturbances and swinging movements of the head.—(Courtesy *Année psychol.*)

3232. James, W. T. Morphological form and its relation to reflex action and behavior. *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 28-54.—Twenty pure-breed and hybrid dogs of the Cornell Anatomy Farm were studied by the conditioned salivation method in a laboratory specially constructed to isolate the animal from disturbing stimuli. The dogs could be differentiated into excitable and inhibitable types on the basis of their behavior during the establishment of a discrimination. In the excitable group are placed the animals that generalize immediately to the negative signal and fail to develop stable discrimination. In the inhibitable group are animals that do not respond at all to the negative stimulus. An intermediate group of animals do not respond to the first negative stimulus, but give vigorous responses to it later. Further studies are in progress to determine the correlation between morphological form and behavior type.—D. G. Marquis (Yale).

3233. Johnston, E. S. Phototropic sensitivity in relation to wave length. *Smithson. misc. Coll.*, 1934,

92, No. 11. Pp. 17.—The influence of radiation of different wave lengths on phototropism is briefly reviewed and discussed. Experiments are described in which the plant photometer was used to determine the sensitivity of the coleoptile of *Avena sativa* to the different wave-length regions of the visible spectrum. The phototropic sensitivity curve rises sharply from 4100 Å to a maximum at 4400 Å. It then drops off to a minimum at about 4575 Å and again rises to a secondary maximum in the region 4700 to 4800 Å. The fall is very rapid from this point to 5000 Å, from which point it tapers off very gradually to the threshold on the long wave-length side at about 5461 Å.—R. J. Beitel, Jr. (Clark).

3234. Lashley, K. S. Studies of cerebral function in learning. XI. The behavior of the rat in latch box situations. *Comp. Psychol. Monogr.*, 1935, 11, No. 2, 1-42.—The five latch boxes involved, respectively, pressing a lever, breaking a strip of paper, pulling open a spring door, pulling a chain, and depressing a metal rod followed by stepping on a platform. Cerebral lesions up to 58% did not retard the learning of the last-mentioned box. There was no relation between rate of learning and extent of lesion. Learning of the other boxes was seriously retarded as a result of lesions. "The amount of retardation with these boxes was roughly proportional to the surface extent of lesion, the correlations ranging from 0.48 to 0.72." Vibrissaeless animals with eyes enucleated and the spinal cord transected at the second cervical segment also manifested retarded learning of the latch boxes. They were, however, retarded "to a significantly lesser extent than animals with cerebral lesions capable of producing the same grade of anaesthesia." Analysis of the different performances of normal and operated animals showed that "the major elements in the retardation of the animals with cerebral lesions are limitation in the variety of exploratory acts, failure to develop movements specifically adapted to manipulate the latches, reduction of time spent in exploring separate items in the situation, and sensory deficiency. The first three of these are characteristic of all animals with extensive cerebral lesions, irrespective of the locus of the lesions. The latches which are learned at a normal rate by animals with cerebral lesions are those which may be operated by the running and climbing movements of the animal, without the development of adaptive manipulative movements." Where retardation appeared, it was due to disturbance "of such function as is implied by the terms attention, insight, and initiative." Bibliography.—N. L. Munn (Pittsburgh).

3235. Mowrer, O. H. The nystagmic response of the pigeon to constant angular acceleration at liminal and supraliminal intensities. *J. comp. Psychol.*, 1935, 19, 177-193.—An apparatus which provides perfectly constant angular acceleration over a wide range of intensities was used to determine: (1) the absolute threshold of the nystagmic (head) reaction to constant angular acceleration; (2) the latency of nystagmus as a function of intensity of stimulation;

(3) the effect of an artificial visual environment, moving concomitantly with the subject, on the absolute threshold of the nystagmic response to uniform angular acceleration; and (4) the relative sensitivity to the effects of rotation of the bilaterally situated horizontal canals. The absolute stimulus threshold is in the neighborhood of an acceleration of $0.79^\circ/\text{second}^2$. Latency of nystagmus decreases in a curvilinear fashion with an increase in stimulation. Vision appears to raise the threshold for the nystagmic reaction, the stimulus threshold being about $1.76^\circ/\text{second}^2$. The horizontal canals do not differ in sensitivity. It is also pointed out that "the threshold of sensitivity to vestibular stimulation is sufficiently high in the homing pigeon to render the nystagmic head reflex entirely worthless as a mechanism for preserving directional orientation during prolonged flight." Bibliography.—N. L. Munn (Pittsburgh).

3236. Murchison, C. The experimental measurement of a social hierarchy in *Gallus domesticus*: I. The direct identification and direct measurement of Social Reflex No. 1 and Social Reflex No. 2. *J. gen. Psychol.*, 1935, 12, 3-39.—Social Reflex No. 1 is defined as the phenomenon of two individuals moving towards each other, Social Reflex No. 2 is the phenomenon of two individuals fighting each other to a decision, and Social Reflex No. 3 is the sex reflex. Chicks were used as S's, and they were divided into three groups: males, females, and males and females. The S's were released at the opposite ends of a Social Reflex Runway, and every possible pairing was used. "Simple social quanta that are easily identifiable are the movement of social objects towards each other, the fighting of social objects to a decision, the sex reflex, the inference that another social body is greater than or less than oneself, and the inference that another social body is greater than or less than some other social body. The first two of these social quanta have been identified in *Gallus domesticus*, have been measured in terms of time and space categories, have been subjected to the technique of the covariable, and have been exhibited in terms of space alone as satisfying both empirically and rationally the equation $\Delta y = k\Delta X$."—H. Cason (Wisconsin).

3237. Osterhout, W. J. V. Nature of action current in *Nitella*. I. General considerations. *J. gen. Physiol.*, 1934, 18, 215-227.—The action current in *Nitella* is to be understood in terms of the movement of potassium ions.—C. H. Graham (Clark).

3238. Osterhout, W. J. V., & Hill, S. E. Nature of the action current in *Nitella*. III. Some additional features. *J. gen. Physiol.*, 1935, 18, 499-514.—Several forms of action-current curve may be accounted for on the ground that the outer protoplasmic surface shows no rapid electrical change. Further implications of this idea are discussed. In many cases there are successive action currents with incomplete recovery. Resemblances to nerve effects are pointed out.—C. H. Graham (Clark).

3239. Rau, P. The jungle bees and wasps of Barro Colorado Island. Kirkwood, Mo.: Author, 1933.

Pp. 324. \$2.75.—A compendium of information concerning the social behavior of the species considered. Behavior observations are given on ten species of stingless bees, representative of the genera *Trigona*, *Lestrimellita*, *Nannotrigona*; some twenty-one species of social wasps, representative of the genera *Metapolybia*, *Polybia*, *Protopolybia*, *Gymnopolybia*, *Polistes*, *Synoeca*, *Mischocyttarus*, *Tatua*, *Nectarina*, *Apoica*; some thirteen species of solitary wasps, representative of the genera *Trypoxylon*, *Ammobia*, *Sceliphron*, *Cerceris*, *Eumenes*, *Ancistrocerus*, *Pachodynerus*, *Zethus*. Several ecological and behavior notes are included on spiders and various insects other than the bees and wasps. One chapter is devoted to the behavior of the great carpenter bee, *Xylocopa virginica*, with notes concerning the genesis of certain instincts. The ninth and concluding chapter presents a philosophical approach to the many biological problems mentioned in the earlier part of the work; the method of evolution, psychic origin of digressions, inheritance of mental acquisitions, and variations are some of the topics discussed.—D. Potter (Clark).

3240. Rochon-Duvigneaud, —. Notes sur quelques points du développement de l'oeil chez *Scyllium canicula* et *Acanthias vulgaris*. (Notes on some points of development of the eye in *Scyllium canicula* and *Acanthias vulgaris*.) *Arch. Zool. exp. gén.*, 1933, 75, 221-233.—The primitive optical vesicle, one of the cerebral vesicles, is of ectodermic origin, but it arises from an ectoderm already invaginated and sheltered by the tegumentary ectoderm; it is encysted with slender walls and maintained in spheroidal form by internal tension, the vitreous body apparently concealed by the mesoderm. If the epithelium of the cornea is taken by itself, it is not an opaque region of tegument, for it is of mesodermic origin. The lens is a vesicular ectodermic invagination superposing itself on the retinal cystic invagination. The epithelial eye, thus formed of the retina and the lens, modeled in a cyst without resistance, is solidly encysted by the mesoderm, which furnishes the cornea-scleral envelope, above which the cutaneous epithelium becomes transparent.—(Courtesy *Année psychol.*)

3241. Steinhausen, W. Ueber die Beobachtung der Cupula in den Bogengangsampullen des Labyrinths des lebenden Hechts. (On the observation of the ampullary crest in the labyrinthic canals of the living pike.) *Pflüg. Arch. ges. Physiol.*, 1933, 232, 500-512.—When the galvanic current provokes ocular reactions, there is no displacement of the ampullary crest; the stimulus must be carried along the epithelial cells or the fibers of the ampullary nerve. If, on the other hand, there is a mechanical stimulus of pressure produced by a cannula introduced into the canal, there is a displacement of the ampullary crest by movement of the endolymph. With a rapid displacement toward the ampulla of the left canal, the reaction is an ocular deviation toward the right; with a slow displacement, there is a left nystagmus of the two eyes. The inverse displacements did not give the ocular reaction.—(Courtesy *Année psychol.*)

3242. Steinhausen, W. Ueber die Funktion der Cupula in den Bogengangsampullen des Labyrinthes. (On the function of the cupula in the ampullae of the labyrinthic canals.) *Z. Hals- Nas- u. Ohrenheilk.*, 1933, 34, 201-211.—Résumé of facts on the observation and cinematography of the movements of the ciliated formation of the ampullary crest in the pike; and the interpretation of the physiological mechanism of the rotary stimulus according to Mach-Breuer's theory. The cupula fills all the space in the living animal between the crest and the ampullary wall, so that the endolymph can be displaced only by pushing away the cupula. Artificially provoked movements of the ampulla set up physiological reactions characteristic of rotation. A short flexion toward the utricle in the left ampulla of the pike sets up a horizontal deviation of both eyes toward the right; with a prolonged flexion there is a horizontal nystagmus, the rapid component of which is directed toward the left.—(Courtesy *Année psychol.*)

3243. Stone, C. P. Sex difference in the running ability of thoroughbred horses. *J. comp. Psychol.*, 1935, 19, 59-67.—After analyzing published reports on thoroughbred running horses, the author concludes that "Many lines of evidence, some of which are weak when considered alone but acquire strength when aligned with others, support the belief that male thoroughbred horses, as a class, surpass female thoroughbreds in running ability. Also, the best of the females are inferior to the best of the males in running ability."—N. L. Munn (Pittsburgh).

3244. Swann, H. G. The function of the brain in olfaction. *Amer. J. Physiol.*, 1935, 111, 257-262.—Rats were trained to discriminate olfactorily one of two food box doors both of which were blocked with scented wood shavings. Lesions were made by means of electric cautery, and after a 14-day recuperation period the rats were retested. Lesions up to 85% of the cortical area, as determined by postmortem and projection of the areas on Lashley's diagram, did not disturb the olfactory discrimination. However, in large lesions several days of senseless behavior were followed by an abrupt change to correct performance, an effect which was explained as probably due to the wearing off of a diaschitic effect. The largest lesion, which included 85% of the cortex, involved 89% of the hippocampus and 78% of the pyriform lobes (the two cortical olfactory structures of greatest size). It is concluded that the discrimination is not mediated by dynamic equivalence of parts of the cortex but that it is a subcortical function.—T. W. Forbes (N. Y. Psychiatric Institute).

3245. Wolfle, D. L. The effect of continuous interchange of alley sections on the maze behavior of rats. *J. comp. Psychol.*, 1935, 19, 91-106.—Rats learned a 19-alley multiple-T maze when all constant visual olfactory, auditory, tactual, and kinesthetic intra-maze cues were eliminated. Rotation of the maze led to a disruption of the response, indicating that extra-maze cues had been effective in learning and retention. The extra-maze cues were probably auditory. Repetition of the experiment with a 14-

unit multiple-T maze yielded similar results. The animals failed to learn a multiple-U maze in which all intra-maze cues and, due to the linear nature of the pattern, all extra-maze cues were rendered ineffective. "Had learning in the first two experiments been controlled by the cerebrum alone, instead of by specific and constant sensory cues, it is difficult to see why learning did not also occur in the multiple-U maze." Animals were able to master the multiple-U maze when sensory cues were present. Elimination of these cues led to loss of the habit. "The present experiments have failed to show any evidence of the ability of the rat to learn to run a maze in the absence of all constant sensory cues, even though learning was possible in spite of very large decreases in the number of constant stimulating conditions which usually provide a basis for learning the maze habit. Evidence for cerebral, as opposed to sensory, control of the habit was entirely lacking." Bibliography.—N. L. Munn (Pittsburgh).

[See also abstracts 3063, 3089, 3099, 3107, 3154, 3168, 3170, 3172, 3173, 3182.]

EVOLUTION AND HEREDITY

3246. Behr-Pinnow, — v. Vererbung und Begabung. (Inheritance and endowment.) *Umschau*, 1934, 38, 705-707.—The inheritance of mental talent is particularly difficult to determine. The author considers this due to various factors: the many-sidedness of endowment, internal changes due to environmental influences, lack of knowledge of hereditary factors essential to a given endowment, and the development of new occupations. He presents different facts which should clarify this problem: inheritance of mathematical ability in the Bernoulli family, the concurrence of mathematical and musical capacity, further evidence for the significance of maternal inheritance, of inbreeding, and of material prosperity.—J. Deussen (Markkleeberg).

3247. Davenport, C. B. Body-build and its inheritance. *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 21-27.—In the study of the genetics of body-build a selective mating is apparent. Slender men tend to marry slender women to an extent 50% exceeding chance expectation. Marriages of fleshy men and women exceed expectation by 80%. Body-build is greatly determined by hereditary factors. Of 43 children whose parents were both very slender, only four were up to medium body-build. When both parents are fleshy, a majority of the offspring eventually become fleshy, although about one-third may be of medium build and a few slender. The offspring of slender parents are least variable, and those of fleshy parents most variable.—D. G. Marquis (Yale).

3248. Geipel, G. Anleitung zur erbbiologischen Beurteilung der Finger- und Handleisten. (Guide to the hereditary-biological estimation of finger and hand performance.) Munich: Lehmann, 1935. Pp. 65. RM. 5.00.—R. R. Willoughby (Clark).

3249. Hartmann, H. Ueber Zwillingsforschung in der Psychiatrie. (Researches on twins in psychiatry.)

Wien. med. Wschr., 1933, 83, 781-785; 809-811.—The author explains the fundamental ideas in the methods employed in the study of twins, and indicates the principal problems encountered. He makes specific suggestions concerning the study of heredity and environment in twin development. He points out the known facts about the heredity of psychoses, neuroses and criminal tendencies. He urges the application of psychoanalysis to twin study, and points out that through a study of twin development it might be possible to discover the non-hereditary factors that come into play during postnatal evolution.—(Courtesy *Année psychol.*)

3250. Levit, S. G. Twin investigations in the U. S. S. R. *Character & Pers.*, 1935, 3, 188-193.—The study of twins in the U. S. S. R. is under the direction of the Medico-Biological Institute, which works along two main lines, medicine and education. Special attention is given to the influence of environment upon development and the correlation of traits and functions. Particular emphasis is placed upon the effectiveness of this or that influence upon the organism. Similar experiments are being conducted on the relative efficacy of different methods of teaching. Incidentally, it is found that a method of "wholes" is more effective than a method of "elements" in teaching children block-building. Three figures are included.—M. O. Wilson (Oklahoma).

3251. Orgler, H. Identische, getrennt aufgezogene Zwillinge. (Identical twins reared apart.) *Int. Z. Indiv.-Psychol.*, 1935, 13, 35-36.—The author recognizes many of the interpretations of social influences in explaining samenesses and differences in the pairs of twins reported. She asserts, however, that in the end personality is not a summation of inheritance and environment but the expression of a self-created attitude toward life.—O. N. de Weerd (Beloit).

3252. Sievers, E. Bericht aus dem Leben eines erbgleichen Zwillingspaares mit einigen bemerkenswerten psychischen Diskordanzen. (Report from the life of a pair of twins with like inheritance having several noteworthy mental differences.) *Allg. Z. Psychiat.*, 1934, 102, 246-283.—P. Krieger (Leipzig).

3253. Wigers, F. Ein eineiiges, bezüglich Schizophrenie diskordantes Zwillingspaar. (Identical twins, different because of schizophrenia.) *Acta Psychiat., Kbh.*, 1934, 9, 541-556.—Case report of a pair of identical twins, one of whom had been diagnosed as schizophrenic. Present age 48 years. 6 references.—V. Coucheron-Jarl (Mooseheart Laboratory for Child Research).

[See also abstracts 3228, 3331, 3334.]

SPECIAL MENTAL CONDITIONS

3254. Adler, A. Der Komplexzwang als Teil der Persönlichkeit und der Neurose. (The drive of complexes as a factor in personality and neurosis.) *Int. Z. Indiv.-Psychol.*, 1935, 13, 1-6.—The complex may be characterized as a pattern-reaction. It is a general term representing a variety of tendencies that drive the subject toward definite goals even when

he is not aware of their presence. Several cases are presented for critical analysis, and the Freudian viewpoint attacked. Several new categories of complexes are presented and applied, as the Savior complex, through which a girl marries a drunkard to save him; drives to seek self-justification for every act and to find a basis for self-confidence; and the drive to express judgments in the forms of similes, the "Polonius" complex.—O. N. de Weerd (Beloit).

3255. Alexander, F. *Über das Verhältnis von Struktur- zu Triebkonflikten.* (The relation of structural and instinctual conflicts.) *Int. Z. Psychoanal.*, 1934, 20, 33-53.—Structural conflicts are those in which an instinctual striving is repudiated by the ego because of condemnation by the super-ego, while instinctual conflicts are those in which an impulse is rejected because it is inconsistent with another impulse acceptable to the ego. The relationships of the two types of conflict are discussed and illustrated by case material, some of which deals with criminals.—S. Rosenzweig (Worcester State Hospital).

3256. Alexander, F. *Concerning the genesis of the castration complex.* *Psychoanal. Rev.*, 1935, 22, 49-52.—This is an analysis of a young man who is temporarily impotent; he has a mature dream that indicates his castration reaction and also shows that he is compensating by an anal reaction (love of money) which, in turn, represents physical strength. This dream made the patient think of a childhood dream in which he reacted to the absence of a penis in his sister, at the same time having castration feelings himself. By the interpretation of these dreams, which the author says represent an attempt of the child to get rid of castration feelings common to all of us, which in adult life he would be able to do, the situation was resolved. The author feels that the analysis of an actual situation is the best way to bring infantile reactions into consciousness.—L. S. Selling (Wayne).

3257. Balint, M. *Charakteranalyse und Neubeginn.* (Character analysis and a new start.) *Int. Z. Psychoanal.*, 1934, 20, 54-65.—Some patients have rather mild neurotic complaints but have a general dread of pleasurable excitement which inhibits them from enjoying life. The origin of this fear in each case studied was a disproportion between the sexual needs and sexual expression of the patient as a child toward an adult in his environment, with experiences of severe reproof by the adult. The transference situation allows for a restatement of the problem and a new orientation toward the expression of sexual impulses. On the basis of these observations, new light is shed on the relation to character formation of anxiety experiences, fear of punishment, and the capacity for loving and hating.—S. Rosenzweig (Worcester State Hospital).

3258. Bergler, E. *Talleyrand-Napoleon-Stendhal-Grabbe.* (Psychoanalytic biographic essays.) Vienna: Int. Psychoanal. Verlag, 1934. Pp. 167.—These are studies of the lives of the four characters indicated, patterned after those studies reported previously using the psychoanalytic type of research. The

author considers Talleyrand as a cynic, and cynicism is due to a strong ambivalence; the ambivalence in this particular case is manifested by aggression. The relationship between Napoleon and Talleyrand is given in the second chapter, where selections are taken from the literature to show subjection and other emotional reactions of Talleyrand toward Napoleon; the ambivalence is particularly shown in this relationship. The third essay is an analysis of the writings and of the life history of Stendhal, who is analyzed as being a narcissistic voyeur. The last essay deals with Grabbe, who is a pessimist on an oral-erotic basis with a sadistic component. The material for discussion in these essays is taken from various psychoanalytic theses and from biographical writings dealing with the lives of the characters. An occasional letter or scrap of composition by the subject is also included.—L. S. Selling (Wayne).

3259. Bergler, E. *Some special varieties of ejaculatory disturbance not hitherto described.* *Int. J. Psycho-Anal.*, 1935, 16, 85-95.—The author cites cases and gives the unconscious mechanisms involved in ejaculatory retardation, absence of ejaculation, one type of which is urethral and the other orally determined, and of coitus as a defense against enuresis.—M. H. Erickson (Eloise Hospital).

3260. Bernfeld, S. *The psychoanalytic psychology of the young child.* *Psychoanal. Quart.*, 1935, 4, 3-14.—Psychoanalysis is discussed in relation to the psychology of children and its application to their training and development is indicated in several aspects. Its distinguishing features, rendering it peculiarly valuable, are then indicated as follows. Psychoanalysis regards all facts simply as natural processes without ethical considerations. This detached point of view is of marked significance in pedagogy, since it permits full observation of all kinds of developmental trends. Further, psychoanalytic conceptions are genetic in character and consequently are more concerned with inter-relationships than with differentiation. A third characteristic is that of pessimism, which arises by virtue of a recognition of the difficulty involved in treating and influencing people and the appreciation of the overwhelming strength of natural forces. The criticism of psychoanalysis because of emphasis upon sexuality arises from misconceptions of the use of the term and a lack of appreciation of the need of recognizing as such the instinctual forces and components manifesting themselves in various forms of behavior. There follows a discussion of the Oedipus complex, its role in the development of the personality, and the aid it offers in understanding the development of the personality.—M. H. Erickson (Eloise Hospital).

3261. Boehm, F. *Anthropophagy: its forms and motives.* *Int. J. Psycho-Anal.*, 1935, 16, 9-21.—The principal psychological motives for cannibalistic practices are: (1) the desire for union with the object incorporated, and (2) the wish to destroy the object. These two impulses correspond to the stages Abraham describes in the oral phase of libidinal development. The first stage is the primary or sucking stage, in

which the child has not distinguished between the ego and an external object. The second or oral-sadistic stage is that at which biting makes its appearance as the earliest form of expression for sadistic impulses. Study of the literature discloses the distribution of cannibalism to be widespread and to occur among varied levels of culture, and not to be related to compelling external circumstances except in rare instances. The motives given consciously for cannibalism usually concern revenge, epicurism, ritualistic and ceremonial practices, magical and sacred rites. Fragments of the ideational content of several schizophrenic patients are quoted to show the importance of oral libido in regard to ideas of cannibalism.—*M. H. Erickson* (Eloise Hospital).

3262. Bornstein, B. Phobia in a two-and-a-half-year-old child. *Psychoanal. Quart.*, 1935, 4, 93-119.—A two-years-four-months-old girl developed an acute anxiety nightly upon being put to bed, required sedatives for sleep, and showed marked fear of losing her mother. A therapeutically successful analysis disclosed that "an early and strict training in cleanliness, later reinforced by the idea, developing from a chance circumstance, that she would be deserted by the mother for uncleanness, forced an early repression of the pleasure in soiling with faeces and the related aggression pleasure which the very deprivation had intensified. As substitute for the procedures corresponding to her level of organization, which were paralyzed by the repression, the child seized upon masturbation. This failed her when the coincidence of three exciting experiences increased her sexual excitement and her anxiety," thus remobilizing with pathogenic intensity her old conflict. The complexity of the mechanisms involved illustrates the complication of mental life even in a two-year-old child.—*M. H. Erickson* (Eloise Hospital).

3263. Bornstein, S. A child analysis. *Psychoanal. Quart.*, 1935, 4, 190-225.—The successful analysis of a three-year-old boy is reported in some detail to give a comprehensive view of the analytic procedure and to demonstrate the importance of an early traumatic experience for later instinctual development. In this case, at the age of one and a half years genital anxiety was aroused during a pregenital phase of development, resulting in a disturbance of the growth of the pregenital erotism and the progression to genital strivings. Reports are given of the significant hours during the analysis to portray the setting resulting in significant communications and their therapeutic effect upon the patient.—*M. H. Erickson* (Eloise Hospital).

3264. Burlingham, D. T. Child analysis and the mother. *Psychoanal. Quart.*, 1935, 4, 69-92.—In child analyses, the mothers in particular play a most significant role. They may be classed in two categories, mothers who are ignorant of analysis and those who have more or less understanding. The mother's reactions to the analysis of the child are uncertain, with feelings of jealousy, humiliation, resentment, and other obstructive emotions frequently developing. There are three methods of handling

parents: (1) to ignore them as completely as possible; (2) to remove the child from the home situation; (3) to include the parents and the home situation in the analytic process. The first two methods are less satisfactory because they exclude a large part of the child's reality situation. The third method increases the analyst's difficulties, since it forces an inclusion of the parents in the therapeutic procedure. Examples are given of the interruptions of analysis because of the involvement of parental problems with those of the child. Further examples illustrate the intimate relationship between parent and child manifested in simultaneous trains of thought and behavior. A further difficulty in child analysis is the maintenance by the analyst of an impartial attitude toward the parent and the child.—*M. H. Erickson* (Eloise Hospital).

3265. Buxbaum, E. Exhibitionistic onanism in a ten-year-old boy. *Psychoanal. Quart.*, 1935, 4, 161-189.—The findings are reported of an incomplete analysis of a mentally retarded ten-year-old boy who masturbated openly and was abnormally restless, tormented by anxiety and poorly coordinated muscularly. As the analysis progressed, diminution of anxiety occurred as the child developed the ability to express his aggressions. Anxiety sources were found to be a desire to punish himself for (1) desire to escape his father's punishment; (2) desire to identify himself with his punishing father; (3) desire to identify himself with his mother who was punished by his father, and (4) desire to win his father's love through identification with his mother. His aggressiveness was considered to be related to a traumatically experienced primal scene, probably during an anal-sadistic phase of development. He had witnessed fellatio, which had apparently caused a regression of libido to a previously abandoned oral level. This fixation apparently accounted for his exhibitionism, which constituted a means of communication by which he could prove the intactness of his penis and challenge others to show theirs. Further, his ego development was at a low level and hence he was restrained only by external prohibitions. His mental retardation was not found to be related to his neurosis. Treatment was discontinued because of a symptomatic recovery.—*M. H. Erickson* (Eloise Hospital).

3266. Christoffel, H. Stuhldrang und Müdigkeit. Ein Zusammenhang zwischen Motorik des Darms und der Skelettmuskulatur. (The urge to defecate and fatigue. A connection between movement of the bowels and of the skeletal musculature.) *Int. Z. Psychoanal.*, 1934, 20, 97-100.—A discussion of three cases in which feelings of fatigue disappeared after bowel movement. The implications of this relationship for the actual neuroses, especially neurasthenia, are brought out.—*S. Rosenzweig* (Worcester State Hospital).

3267. Deman, H. Het kind en de adolescent in de psychoanalyse. (The child and the adolescent in psychoanalysis.) Antwerp: 1934.—This book offers a popular presentation of analytical psychology as it concerns childhood and puberty. It is based mainly

upon Freudian psychoanalysis, but refers also to the work of Adler, Jung, and Stekel. The general outlines of child development are supported by the author's own observations. The author makes some fundamental assumptions that contradict Freud. Details of development up to puberty are supplemented by three chapters, on adulthood, neuroses, and education. The educational principles, which emphasize a moralizing point of view, are in conflict with recent conclusions of psychoanalysis, particularly with regard to the problem of masturbation. The free and correct answering of all children's questions is urged.—*J. Lampl de Groot.*

3268. Dreikurs, R. *An introduction to individual psychology.* London: Kegan Paul, 1935. Pp. viii + 152. 3/6.—Adler contributes an introduction to this book, which is a series of short essays dealing, partly in a theoretical and partly in a practical way, with some of the main difficulties found by the individual in his effort to adjust himself to society.—*F. C. Bartlett* (Cambridge, England).

3269. Dugas, L. *Réflexions sur un rêve.* (Observations on a dream.) *J. Psychol. norm. path.*, 1934, 31, 798-800.—An analysis of a commonplace dream with nothing of the fantastic to capture the attention of the psychoanalyst. The author concludes that organic sensations completely explain the character of his dream and that the so-called dream images are colored by the dreamer's emotionality.—*P. S. de Q. Cabot* (Harvard).

3270. Ferenczi, S. *Gedanken über das Trauma.* (Reflections on trauma.) *Int. Z. Psychoanal.*, 1934, 20, 5-12.—This posthumous paper is a discussion of (1) the psychology of emotional shock, (2) the significance of trauma in the interpretation of dreams, and (3) the application of these views to the "relaxation technique" in analytic therapy.—*S. Rosenszweig* (Worcester State Hospital).

3271. Freud, A. *Psycho-analysis for teachers and parents.* (Trans. by Barbara Low.) New York: Emerson Books, 1935. Pp. 117. \$1.75.—The four introductory lectures given before the teachers in the children's centers of Vienna are presented. The first lecture discusses the questions of infantile amnesia and the Oedipus complex. Lecture two is concerned with infantile instinct life and children's behavioral manifestations of this. The third lecture elaborates upon the latency period and its role in the development of the personality. In the final lecture, the relationship between psychoanalysis and pedagogy is discussed, with examples cited from case histories to illustrate the need of a comprehensive grasp of psychoanalytic principles to permit the teacher to cope adequately with pedagogical problems.—*M. H. Erickson* (Eloise Hospital).

3272. Freud, A. *Psychoanalysis and the training of the young child.* *Psychoanal. Quart.*, 1935, 4, 15-24.—The importance of the role of the teacher, particularly of the teacher of the very young, is discussed, together with the need of a psychological understanding of the personality forces in young children. There follows a discussion of the general

methods of education, which has two functions, (1) "allowing and forbidding" as applied to the teacher's behavior toward the child's spontaneous expressions, and (2) the building up of the child's personality. The need for the teacher to respect the child's instinctual wishes is paramount. Two schools of educational views exist; (1) to respect the child's mental life as naturally right and good, and (2) to regard the child as always in the wrong. Knowledge gained from psychoanalysis, since it affords an appreciation of the inter-relationships of behavioral manifestations, enables a more understanding approach to the problems of child development, thus permitting an avoidance of the tendency of educators to establish blanket prohibitions in regard to instinctual dangers. The need of development of control and sublimation is most important. Training is more easily effected during the object-love phase than during the auto-erotic phase. The role of the Oedipus situation and the formation of the super-ego are then discussed in relation to child training.—*M. H. Erickson* (Eloise Hospital).

3273. Freud, S. *Tre avhandlingar om sexualteori.* (Three lectures on the theory of sex.) Copenhagen: 1935. Pp. 118.—Danish translation of *Drei Abhandlungen zur Sexualtheorie*.—*V. Coucheron-Jarl* (Mooseheart Laboratory for Child Research).

3274. Hermann, I. *Bemerkungen zu Ferenczis "Gedanken über Trauma."* (Remarks on Ferenczi's "Reflections on Trauma.") *Int. Z. Psychoanal.*, 1934, 20, 12-15.—During the early years of its development, psychoanalysis emphasized the trauma in its theoretical constructions. Interest later shifted to the general laws of psychic development. The earlier emphasis places the individual himself, rather than extra-individual laws, in the foreground. Since Ferenczi was mainly occupied with the individual in all his uniqueness, the concept of trauma was crucial for him. A short account of this concept in relation to the rest of Ferenczi's thought is given.—*S. Rosenszweig* (Worcester State Hospital).

3275. Hill, L. B. *A psychoanalytic observation on essential hypertension.* *Psychoanal. Rev.*, 1935, 22, 60-64.—This is a report of the case of a man who had a blood pressure which ran around 170/110. The case was studied and it was found by analysis that he was reacting to the fact that at one time his mother whipped him with a buggy whip. He became very much disturbed during the interview when he came to this part of the analysis, and after it had come out his blood pressure returned to normal. There is a history of vascular instability in the family. The interpretation is that this man's unstable vascular system was reacting to an unconscious feeling toward the dominant mother, so that when the experience was lined up with the rest of his adult relationship, the tension was lowered.—*L. S. Selling* (Wayne).

3276. Hitschmann, E. *Die Psychoanalyse der nervösen Sexualstörungen.* (The psychoanalysis of nervous sexual difficulties.) *Wien. med. Wschr.*, 1933, 83, 973-977.—Such sexual difficulties as precocious ejaculation, frigidity, vaginismus, onanism, etc.,

are usually referred to specialists on venereal or skin diseases; they should, however, be referred to psychoanalysts.—(Courtesy *Année psychol.*)

3277. Holub, A. **Ausbreitung der Individualpsychologie.** (The spread of individual psychology.) *Int. Z. Individ.-Psychol.*, 1935, 13, 30-35.—The author points out the increasing recognition accorded the individual-psychological conceptions by medical men, surgeons, pediatricians, and ethnologists. "Individual as a whole," "socialization of the individual," and "organic inferiority" are among the concepts cited.—O. N. de Weerd (Beloit).

3278. Homburger, E. **Psychoanalysis and the future of education.** *Psychoanal. Quart.*, 1935, 4, 50-68.—The analyst is a passive, impartial observer, while the teacher is forced to be an active personal influence. Hence the value of psychoanalysis for the teacher lies in giving him an appreciation of human instincts and an understanding of how to apply this knowledge in meeting pedagogical problems. In the question of sexual enlightenment, teaching and psychoanalysis converge fundamentally. The author illustrates this point by reporting his experiences in answering the questions of a seven-year-old boy. The questions may be classified as simple questions of interest and as questions representing anxiety. At first, the questions showed a desire for general information, but later there was revealed in a disguised fashion an intense sexual curiosity. The author then elaborates upon the significance of childish questions in expressing definite personality trends, phases of development, and libido tensions which need to be recognized and met if the inquiring child is to develop properly. Only by virtue of the profound knowledge of psychoanalytic concepts can the teacher hope to understand and to meet adequately the profound problems presented to him in the guise of superficial questions by his charges.—M. H. Erickson (Eloise Hospital).

3279. Lasswell, H. D. **Verbal references and physiological changes during the psychoanalytic interview: a preliminary communication.** *Psychoanal. Rev.*, 1935, 22, 10-24.—In the brief history of psychoanalysis many methods of reporting have been used. The time has come for something more accurate than mere verbal observations on the part of the analyst. Since there are changes in the physiological tension to be observed during the psychoanalytic interview, some method of measuring these in order to make psychoanalysis more objective is necessary. For this purpose physiological means should be used. The author uses a record of pulse rate and galvanic resistance as measured on the galvanograph and the polygraph, and also records the word rate by means of a microphone. He uses subjects who are normal or slightly psychoneurotic. In this preliminary report he indicates that there is evidence that verbal changes and physiological changes during psychoanalytic interviews can be related by means of a technique with precise measurements. In particular, changes in active affects are associated with pulse rate and changes in unconscious tension, associated with electrical skin conductivity.—L. S. Selling (Wayne).

3280. Low, B. **The psychological compensations of the analyst.** *Int. J. Psycho-Anal.*, 1935, 16, 1-8.—The analytic situation may be used by the analyst for three purposes: (1) gratification of unconscious, particularly pregenital or infantile genital wishes; (2) gratification of wishes to look at forbidden sexual objects by converting the analysis into a viewing process; (3) the gratifications to be derived from playing the role of consoler and savior. The analyst must undergo three deprivations: (1) inhibition of narcissistic pleasure; (2) inhibition of dogmatic intellectual certitude; (3) modification of the super-ego. The essential process of analysis appears to be a form of introjection and projection on the part of the analyst directed towards the material presented by the patient. By the analyst's emotional reaction to this introjected material, he enables a freer flow of expression on the part of the patient, since he has made the patient's material a "good object" through his introjection of it. By such introjection, the analyst experiences pleasure at the oral-anal level. The interaction of the analyst's emotions and the patient's emotions, both in direct regard to the material presented, is most clearly illustrated in child analysis.—M. H. Erickson (Eloise Hospital).

3281. Marui, K. **The process of introjection in melancholia.** *Int. J. Psycho-Anal.*, 1935, 16, 49-58.—A case is cited of a young man who developed the typical symptoms of melancholia after the death of his grandmother. Analysis disclosed him to be strongly ambivalent in his attitude toward her, hating her as much as he loved her. His hate could not be maintained after her illness and death, both of which events gratified his feelings of hatred, but had deprived him of a hate-object. Consequently his hate turned against himself, causing self-reproaches and tortures. The factors involved were an excessive object love and the undue external compulsions exercised upon him during his development by his grandmother, which had resulted in interference with super-ego development and the introjection of the grandmother's super-ego into his own. In consequence of this, the patient's ego behaved toward the introjected super-ego as in childhood his grandmother had behaved toward him.—M. H. Erickson (Eloise Hospital).

3282. Morgenthaler, W. **Zur Psychologie der Uebertragung.** (On the psychology of transference.) *Schweiz. med. Wschr.*, 1933, 63, 33-38.—The author defines the term *transference*, describes its function, and distinguishes between positive, negative, ambivalent, and counter-transference. All transferences pass through three stages: establishment (with three possible degrees: confidence, sympathy, love with sexual desire); development (with resistance phenomena, the crisis, and possibly the "transference neurosis"); and the solution. Resistance may take several forms (tentative escape from the discovery of the essential; hiding behind evasive politeness, rational or intellectual discussions, inhibition of associations, negative reactions); it has at its root the patient's fundamental unwillingness to give up his neurotic pattern. The crisis commences when

the analysis has progressed far enough to disclose vulnerable layers; it is announced by sudden tears, fits of laughing, states of mild excitement, or even by the bursting forth of a latent psychosis. In "transference neurosis" the analyst becomes the object of the neurotic preoccupations of the patient, while the other symptoms seem to disappear; the analyst must interrupt the treatment to bring back the symptoms. The ideal ending of an analysis is spontaneous; it may, on the other hand, present difficulties, which manifest themselves in suicidal attempts, unwise decisions, etc. There is a brief discussion of transference in psychopathies, psychoses, hysteria, etc.—(Courtesy *Année psychol.*)

3283. Pensinus, K. A rejected child. *Psychoanal. Quart.*, 1935, 4, 37-49.—A report is given of the behavior disturbances of a 4½-year-old boy in a kindergarten. He was shy, anxious, passive in attitude, rejected at home, and deprived of his rights and love by another child. He was unable at first to comprehend the manifest equality of rights among the kindergarten children. He reacted at first by aggression against his mates, later by searching for love substitutes, and finally achieved an identification with his home rival. By means of psychoanalytic procedures there occurred a resolution of his fixated anxiety, permitting self-expression, and a satisfaction of his need for affection, permitting a healthy object relationship.—M. H. Erickson (Eloise Hospital).

3284. Portl, A. Profound disturbances in the nutritional and excretory habits of a four-and-one-half-year-old boy: their analytic treatment in a school setting. *Psychoanal. Quart.*, 1935, 4, 25-36.—Observations over a period of eight months are reported on a boy, aged 4 years 9 months, who behaved in a completely passive manner, soiled and wet himself, neglected to eat, did not respond to verbal approaches, showed no interest in the outer world, and maintained himself in a completely dependent state upon his mother. In a kindergarten situation, he developed a brief friendship for a school mate, then began making contacts with the author. Anamnesis disclosed his mother to have communicated to him a marked repulsion for his genitals, which constituted a great burden for him. As interpretations were given to the child, gradually he reacted with intensely aggressive behavior. Finally, he cast himself first in the role of animals and then in the role of an infant. At the close of the period of observation he had made significant improvement, but still manifested much timidity and an infantile dependence upon his teacher.—M. H. Erickson (Eloise Hospital).

3285. Rado, S. *Psychoanalyse der Pharmakothymie (Rauschgiftsucht). I. Das klinische Bild.* (The psychoanalysis of pharmacothymia (drug addiction). I. The clinical picture.) *Int. Z. Psychoanal.*, 1934, 20, 16-32.—The ego gains various sorts of satisfaction from the taking of drugs. The narcissistic gratification that intoxication affords may eventually become preferable to social and genital satisfactions. In this event masochism is apt to come to the fore and the death instincts gain ascendancy. The libido

then compromises in various ways with the masochistic trends.—S. Rosenzweig (Worcester State Hospital).

3286. Ramos, A. A tecnica da psychanalyse infantil. (Technique of infantile psychoanalysis.) *Arch. brasil. Hyg. ment.*, 1933, 6, 195-205.—Ramos points out with Anna Freud that of the four classic methods of psychoanalysis (the personal history, interpretation of dreams, free association, and interpretation of transference reactions) the interpretation of dreams gives the most brilliant results in child analysis. He maintains with Melanie Klein that the child's inner life can be profitably studied from his play reactions. Toys symbolize desires. Attitudes toward dolls reveal attitudes toward persons in the child's surroundings. It is necessary to explain sex matters clearly, lest false ideas be developed which lead to much more infantile anxiety than adults realize. Analysis must be preceded by and associated with education and lead on to sublimation. Play activities are the first attempts at sublimation. These should be directed eventually to channels of activity having value to humanity.—T. V. Moore (Catholic University).

3287. Rieper, P. Zu viel Schlaf—zu wenig Schlaf? (Too much sleep, or too little?) *Umschau*, 1934, 38, No. 30.—The writer takes up, primarily from the biological standpoint, the question: "Is it necessary that we sacrifice a third of our life to sleep?" He considers it possible that one can, through a rational apportionment of sleeping time, shorten the hygienically necessary period. He distinguishes especially between morning- and evening-sleepers according to the optimum depth of their sleep.—J. Deussen (Markkleeberg).

3288. Robbins, B. S. A note on the significance of infantile nutritional disturbances in the development of alcoholism. *Psychoanal. Rev.*, 1935, 22, 53-59.—This is a report of the analysis of an alcoholic who was institutionalized during part of the treatment. He is reacting to a mother deprivation. The significance of the consumption of alcohol was twofold: it served erotic needs in gratifying oral, bodily and cellular cravings, and it was also calculated to maintain a personality economy in which narcissism was vital. It reinforced the threatened fantasy of the great, incorporated, ever-satisfying mother and sustained the illusion of self-sufficiency. The bitterly hated real mother was drowned in alcohol, so to speak. With the diminution in compulsive drinking the patient became able to enjoy the alcohol in moderation; his condition improved. Weaning from alcohol had its compensation from the attainment of adult satisfaction.—L. S. Selling (Wayne).

3289. Rümke, H. C. *Entwicklungspsychologie und Psychotherapie.* (Developmental psychology and psychotherapy.) *Zbl. Psychother.*, 1934, 7, 347-362.—Rümke discusses the determinants of the different types of life-curves of psychic development and the individual's position on his curve in relation to the success of psychoanalysis. The determining factors are: the hereditary anlage; the direction in

which development is sought (entelechy); the driving force behind these (Urhormes); developmental tempo; the capacities for psychic integration, creative dissociation and existential experiences; and the course of libido and ego development. The persons with whom psychoanalysis succeeds have a clearly circumscribed personality picture, quite different from those in whom the treatment fails, and neuroses of the ascending curve have a different meaning (blocking of development) from those of the stationary or descending line (the superstructure over a primary lack in integration and instincts). Analysis scores its greatest success in neuroses of the rising curve, while in those of the stationary or sinking line the prognosis is bad. If, however, the capacity for existential experience still exists in mature life, analysis will be very fruitful.—*M. E. Morse* (Baltimore).

3290. **Rylander, F. Barbiturism—en ny narkomani.** (Barbiturism—a new narcomania.) *Svenska Läkartidn.*, 1935, 32, 65-67.—Veronal and other sleep-inducing medicaments derived from barbituric acid have been shown to have detrimental effects. Acute over-dosing produces ataxia, nystagmus, reflex disturbances, double vision, and other symptoms from the cranial nerves. Prolonged habitual use, however, produces a somewhat different picture, which in France has been called *barbiturisme* (Heyer, G., *L'Hygiène Mentale*, 1930). Typical for many cases of this disease is a striking similarity to general paralysis. Occasionally neurasthenic symptoms are dominant. Euphoria is especially prevalent.—*V. Coucheron-Jarl* (Mooseheart Laboratory for Child Research).

3291. **Schmideberg, M. The psycho-analysis of asocial children and adolescents.** *Int. J. Psychoanal.*, 1935, 16, 22-48.—Material is given from the analysis of six asocial patients ranging from 6½ to 20 years, supplemented by material from analyses of neurotic children. Some of the behavioral manifestations discussed in the light of the case material and the analytic findings are aggression, stealing, lying, calumny, truancy, sexual shamelessness, obscenity, identification with bad prototypes, absence of normal restitution tendencies, regression factors, and a lack of a sense of guilt in regard to behavior and the amorality of actions. Asocial behavior is defined as representing a flight from paranoid fantasies to reality, and may accordingly be regarded as a spontaneous attempt to cure a psychosis in its initial stages.—*M. H. Erickson* (Eloise Hospital).

3292. **Siebert, K. Die Gestaltbildung im Traum. Eine experimentelle Untersuchung.** (The formation of wholes in dreams. An experimental investigation.) *Arch. ges. Psychol.*, 1934, 90, 357-372.—Because other investigators of the production of dreams by means of physical stimuli have experimented on subjects in normal sleep and thus have not been able to control many important factors, it was decided to conduct a similar experiment on subjects while under hypnosis. Three cooperative persons served as subjects. The subject was first hypnotized and a type dream was suggested. While the subject was dream-

ing a sensory stimulus (a whistle, perfume, etc.) was presented, after which the subject was allowed to continue the dream for about one-half minute. He was then told to awake and relate the dream in detail. An analysis of the resulting protocols leads to the conclusion that when two factors are both impressed on the consciousness of a hypnotized person, they are synthesized into a meaningful whole of experience. Several theoretical implications of the results are discussed.—*E. L. Kelly* (Connecticut State College).

3293. **Steiner, M. Was hat der Sexualarzt der Psychoanalyse zu verdanken?** (What is the sexologist's debt to psychoanalysis?) *Int. Z. Psychoanal.*, 1934, 20, 85-92.—An adequate short answer to this question is "Everything." The work of the physician dealing with sexual disorders has been much facilitated by the enlightenment of the public attendant upon psychoanalysis. The new attitude has encouraged patients to bring their sexual problems to the doctor. On the side of the physician, the gain has been even greater. He has obtained a new orientation toward such disturbances as sexual frigidity, impotence, neurasthenia and perversions.—*S. Rosenzweig* (Worcester State Hospital).

3294. **Stekel, W. Das Phänomen der Gegenübertragung.** (The phenomenon of counter-transference.) *Psychother. Prax.*, 1934, 2, 67 ff.—Just as the patient puts the physician in the position of most important person with respect to his conflict, the physician tends, in accordance with the law of counter-transference, to ascribe to his patient a role which lends meaning to his own life-conflict and makes up a deficit in his own life-account. Ideally, however, the goal is always the objective cure of the patient, with the neglecting of all personal motives of the physician.—*P. Krieger* (Leipzig).

3295. **Sterba, E. Excerpt from the analysis of a dog phobia.** *Psychoanal. Quart.*, 1935, 4, 135-160.—A 7½-year-old girl, previously normal, developed a severe dog phobia following measles and otitis media. Analysis disclosed positions and changes in the child's libido to be as follows. Previous to the outbreak of the phobia, the libido was passive, anal, and masochistic, with the mother as object. After recovery from measles, during which she had been given enemas, gratification desires were so strong that they could be resisted only by means of a phobia. Mastery of the phobia was achieved by denial of the lack of a penis and the assumption of a masculine role. Experiences, however, during a temporary interruption of the analysis compelled reality recognition which reactivated the phobia and caused a flaring up of revenge impulses toward the mother, which were suppressed in favor of the development of an obsessional neurosis. By means of conscious aggressive impulses toward the mother, expressed in dreams and play, the neurotic symptoms arising from the suppression of hostility were removed. The acceptance under treatment of sex differences and thereby of the passive-feminine role rendered the last neurotic development unnecessary to the personality.—*M. H. Erickson* (Eloise Hospital).

3296. Sterba, R. *Das Schicksal des Ichs im therapeutischen Verfahren.* (The fate of the ego in therapeutic procedure.) *Int. Z. Psychoanal.*, 1934, 20, 66-73.—In analysis, the ego experiences a specific fate which may be described as therapeutic dissociation. When analysis begins, the ego is split by the analyst's interpretation of the transference, so that one part of it is set free to assume the function of intellectually contemplating the other part, allied with the id. A complementary synthetic function of the ego counterbalances this dissociation and makes analytic therapy possible.—S. Rosensweig (Worcester State Hospital).

3297. Wälder, J. *Analyse eines Falles von Pavor nocturnus.* (Analysis of a case of pavor nocturnus.) *Z. psychoanal. Pädag.*, 1935, 9, 5-70.—As a lengthy and exhaustive analysis of a boy of seven this case reveals numerous and varied items of technical importance. The pavor nocturnus and the allied cardiac disturbance were traced to an Oedipus situation complicated by other feelings of guilt and anxiety. The child was reared in lower-class surroundings and witnessed at close range aggressions on the part of the parents. Analysis began with investigation of secondary symptoms by way of fantasy development. Its course was complicated by various incidents that occurred at home during treatment. Many devices were found useful that add to the possibilities of psychoanalysis of children. Anna Freud's views were often vindicated. The child was able to grasp more of the interpretation than one would expect. The conflicts remained resolved after several years, beyond the onset of puberty, although family circumstances had changed for the worse.—H. D. Spoerl (Boston).

3298. Weiss, E. *Agoraphobia and its relation to hysterical attacks and to traumas.* *Int. J. Psychoanal.*, 1935, 16, 59-83.—The author concludes from his analytic work with traumatic neurosis and cases of agoraphobia and similar phobias that there exists an intimate connection between the problems of the significance of hysterical attacks, of psychic traumas and of the anxiety experienced in agoraphobia. He presents his findings in various cases to illustrate the mechanisms involved in phobias in general, discussing the relationship between inner anxiety and the death instinct, the mechanism of the repression involved in his cases, the function of masochism, particularly genital masochism, and its relation to the death instinct, the general relationship of the death instinct to psychic trauma, and resemblance between the mechanism of the transference neurosis and true traumatic neurosis.—M. H. Erickson (Eloise Hospital).

3299. Whitehead, G. *An inquiry into spiritualism.* London: Bale and Danielsson, 1934. Pp. vii + 466. 10/6.—The book discusses the basis and limits of human credulity, gives numerous illustrations, and considers in detail most of the well-known cases of spiritualistic phenomena and many which are not well-known. No decisive conclusions are reached, but on the whole the bias is against the validity of

the more sweeping spiritualistic claims, but slightly in favor of telepathy and clairvoyance. The presentation is popular, but plenty of references to original researches are given.—F. C. Bartlett (Cambridge, England).

3300. Winsor, A. L., & Richards, S. J. *The development of tolerance for cigarettes.* *J. exp. Psychol.*, 1935, 18, 113-120.—The authors sought to determine the extent to which man may develop tolerance for cigarettes as far as progressive changes in motor or secretory activity may be assumed to represent fundamental changes of tolerance. Summarized findings are as follows: (1) When most of the smoke from one cigarette was inhaled deeply by unhabituated subjects on successive days, definite motor and secretory changes occurred. (2) There was a marked but gradual reduction in both the extent and duration of unsteadiness for 20 to 30 days. Thereafter no further reduction could be attained. About a 50% tolerance was achieved as far as motor activity was concerned. (3) The change in secretory activity was from definite inhibition following the smoking to at least the normal rate. Tolerance seemed to be complete by the 28th day. (4) When the smoking was discontinued the partial tolerance, represented by a reduction in unsteadiness, began to disappear immediately, but some tolerance was still apparent after a 3 months' interval. (5) Individual differences in both degree of tolerance attainable and the rate of its development were observed.—H. W. Karn (Clark).

[See also abstracts 3144, 3147, 3204, 3205, 3339, 3362, 3375, 3391, 3416, 3503.]

NERVOUS AND MENTAL DISORDERS

3301. Banister, H. *Psychology and health.* New York: Macmillan; Cambridge, England: University Press, 1935. Pp. 256.—A survey of psychology in its relations to health, including discussion of the difficulties which arise at various stages of development, those which occur in physical health and those which follow physical sickness, and the diverse kinds of psychological maladjustments which may result. The views of the leaders of the various schools of psychopathology are outlined and various methods of treatment are suggested. A concluding chapter describes the possibilities of prevention of mental difficulties through a complete understanding of the "sentiment-formation tendency" of individuals.—J. McV. Hunt (Worcester State Hospital).

3302. Bowman, K. M. *A study of the pre-psychotic personality in certain psychoses.* *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 180-210; *Amer. J. Orthopsychiat.*, 1934, 4, 473-498.—The pre-psychotic personality was studied in 322 cases of mental disease with the use of 96 normal controls for comparison. Forty personality traits were coded and frequencies of these traits were tabulated according to diagnosis. The findings are presented in a series of nine tables. The similarities and differences among four groups—schizophrenia, affective psychoses, general paresis

and normal controls—are discussed.—*D. G. Marquis (Yale).*

3303. **Campbell, C. M. Personality and the psychoses.** *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 169-179.—The personality and the psychosis are not independent concepts: the psychosis is the personality; it is the individual in action. It is the task of the physician's analysis to bridge the gap between the pre-psychotic condition and the psychosis. The bridge may be sought at various levels, conscious, subconscious, somatic. It is necessary to pay attention not only to psychological type and conventional personality traits, but to make a dynamic analysis of this longitudinal section of the patient's life.—*D. G. Marquis (Yale).*

3304. **Chidester, L. Therapeutic results with mentally retarded children.** *Amer. J. Orthopsychiat.*, 1934, 4, 464-472.—The following summary is presented by the author: "Three cases of mental deficiency are reported, one associated with endocrine disturbances, one due to infantile neurosis and one due to an infantile psychosis. The case associated with endocrine disorder (Froehlich's syndrome) was treated first with pituitrin and then with antuitrin. The rate of mental development (I.Q.) jumped ten points within eight months after the antuitrin therapy was begun. The infantile neurosis was in a very young child, one who was able to respond to a more gratifying environment than had produced the neurosis. After two years in the new environment, his behavior, motor coordination, school work and play had improved. There was a rise of about 34 points in his I. Q. The third case, one of schizophrenia beginning in early childhood, came for treatment years later when the psychosis was very deep rooted and the patient nearly grown. He received psychoanalytic treatment for a short time only because unavoidable external circumstance made it impossible to continue his treatment. However, considerable improvement in his emotional condition and behavior was evident and there was a rise of 13 points in his I. Q."—*J. J. Carlson (Aurora-on-Cayuga, N. Y.)*

3305. **Doll, E. A., & Longwell, S. G. Genetic development of children with cerebral birth lesions.** (Film.) Vineland, N. J.: 1934. 1 reel, 450 ft., 16 mm. \$5 rental; \$50 sale (rented or sold on contract for professional showing only).—A silent film, adequately edited and titled, and supplied with detailed descriptive script, comparing the motor development of subjects with motor handicaps resulting from intracranial birth lesion with that of physically normal persons on a genetic basis. Certain movements of normal subjects are shown at birth, three months, six months, twelve months, two years, and four years, to suggest the practicability of developing an age scale of motor development. This is followed by sequences showing a pair of premature identical twins, aged three years, both of whom are mentally normal and one of whom is severely handicapped by intracranial birth lesions resulting in motor development not greater than that of the newborn infant.

Next is shown a mentally normal birth-injured child, age five years, with motor development at about three months. Then follows a sequence showing a mentally deficient birth-injured boy, mental age five years, life age sixteen, with motor development at about six months. The last sequence shows a boy with mental deficiency due to birth injuries but without motor handicap.—*E. A. Doll (Vineland).*

3306. **Doll, E. A., & Longwell, S. G. Institutional care of the feeble-minded.** (Film.) Vineland, N. J.: 1934. 1 reel, 400 ft., 16 mm. \$5 rental; \$50 sale (rented or sold on contract for professional showing only).—A silent film, adequately edited and titled, and supplied with detailed descriptive script, portraying various types and degrees of feeble-minded children and adults in everyday activities. Successive scenes show details of personal care, methods of mental examination, school instruction, occupational and industrial training, and recreational life of mentally subnormal subjects at The Training School at Vineland, New Jersey.—*E. A. Doll (Vineland).*

3307. **Doll, E. A., & Longwell, S. G. Mental deficiency due to birth injury: spastic and athetoid types.** (Film.) Vineland, N. J.: 1934. 1 reel, 400 ft., 16 mm. \$5 rental; \$50 sale (rented or sold on contract for professional showing only).—A silent film, adequately edited and titled, and supplied with detailed descriptive script, contrasting the spastic and the athetoid types of motor handicaps resulting from intracranial birth lesions in two mentally deficient subjects (morons), based on a research routine designed for the study of gross and fine coordination. The sequences portray some of the essential differences between the two principal types of motor handicaps resulting from injuries at birth.—*E. A. Doll (Vineland).*

3308. **Doll, E. A., & Longwell, S. G. Physical handicaps associated with intracranial birth lesions.** (Film.) Vineland, N. J.: 1934. 1 reel, 400 ft., 16 mm. \$5 rental; \$50 sale (rented or sold on contract for professional showing only).—A silent film, adequately edited and titled, and supplied with detailed descriptive script, showing individual differences in degree and type of mental and physical handicaps resulting from birth injuries. Significant motor disabilities of the birth-injured (talipes equinus, scissors gait, ankle and wrist contracture, facial overflow, athetoid hand, spastic arm and fingers, and intention tremor) are displayed in comparison with the movements of a physically normal mentally defective child. The film concludes with sequences showing effects of muscle training.—*E. A. Doll (Vineland).*

3309. **Doll, E. A., & Longwell, S. G. The research laboratory—The Training School at Vineland, New Jersey.** (Film.) Vineland, N. J.: 1934. 1 reel, 350 ft., 16 mm. \$5 rental; \$50 sale (rented or sold on contract for professional showing only).—A silent film, adequately edited and titled, and supplied with detailed descriptive script, portraying various aspects of the work of the Vineland Laboratory. Pictures of the professional personnel associated with the development of the Laboratory are followed by representa-

tive scenes within and around the Laboratory building, showing variety and use of equipment, methods of mental examination, representative experimental work, and sequences showing psychologists and other scientific workers of note associated with the history of this research station.—*E. A. Doll* (Vineland).

3310. Endara, J. [Ed.] *Trabajos del Curso-Escolar de 1932-1933, cátedra de clínica psiquiátrica y neurológica*. (Studies growing out of the school course of 1932-1933, chair of clinical psychiatry and neurology.) *Arch. Fac. Cienc. med., Quito*, 1934, 4. Pp. 470.—A compilation of the researches conducted by students of the author (from the University of Quito, Ecuador) during the year 1932-1933. The studies described include: the evaluation of time in schizophrenics; experimental emotion in psychiatry; affectivity in dementia praecox; delusional language; Binet tests in psychiatry; physiognomy in insanity in relation to individual character; logical memory, elementary calculation in psychopaths.—(Courtesy *Année psychol.*)

3311. Ferenczy, J. *Handarbeiten weiblicher Geisteskranker*. (Needle-work of the female insane.) *Allg. Z. Psychiat.*, 1934, 102, 341-355.—Such needle-work lacks any unitary composition, and is mere form- and color-conglomeration. Anxiety feeling is expressed in increasingly smaller stitches. The manic mood increases the pressure of activity without bettering the performance. The consumption of material is 2-3 times greater than with normals.—*P. Krieger* (Leipzig).

3312. Fritz, M. F. *Pernicious anemia: a study in psychodietetics*. *Proc. Ia Acad. Sci.*, 1933, 40, 190.—Pernicious anemia causes mental symptoms. The mental symptoms may precede the typical blood picture. There is need for certain precautions in psychotherapy.—*B. Wellman* (Iowa).

3313. Garretson, W. V. P. *Allergy: a neuroendocrine interpretation*. *Med. Rec., N. Y.*, 1935, 141, 269-273.—The author defines "allergy as a vegetative nervous system manifestation resulting from the valency variation of serum globulin in its combining reaction to foreign protein owing to the lowered receptivity of the globulin fraction existing in hypoadrenic states." Deficiency of adrenalin results in vagotonia, and innumerable allergic phenomena are dependent upon the segment of the spinal cord through which the vagotonia is expressed. Allergic victims are always toxic. There follows a discussion of the vegetative nervous system and its relationship to endocrine secretions, and a discussion of endocrine types. The author states that cases of allergy occur only in persons in whom suprarenal gland functions have predominated and who are hypoadrenic. Vaccine therapy is speculative and the therapeutic results are contingent upon the stimulation of the endocrine system, with the cure achieved only by overcoming hypoadrenia. Psychic stresses through psychological manifestation may produce hypoadrenia with resultant allergy. Treatment is detoxication, relief of psychical stresses, and proper endocrine therapy.—*M. H. Erickson* (Eloise Hospital).

3314. Gordon, R. G. *The neurotic and his friends*. London: Methuen, 1934. Pp. 87. 2/6.—This monograph of five chapters discusses the neurotic patient, the general social and personal forces at work in producing neuroses, the various types of neurotic reactions, the general misconceptions of the public regarding neuroses, and the general rules to be followed and difficulties to be met in psychotherapy. An index is given.—*M. H. Erickson* (Eloise Hospital).

3315. Greenwald, D. U. *Some galvanic responses of psychopathic individuals*. *Proc. Ia Acad. Sci.*, 1933, 40, 194-195.—Psychogalvanograph recordings while viewing a motion picture were taken on 50 psychopathic individuals of the classes schizophrenia, manic-depressive psychosis, organic disorder, and psychoneurosis. Marked variations from the normal in amplitude and frequency of response were found.—*B. Wellman* (Iowa).

3316. Groves, E. R. *The development of social psychiatry*. *Psychoanal. Rev.*, 1935, 22, 1-9.—Social psychiatry has been advanced through three groups, the psychiatrists, the sociologists, and the mental hygienists. The present paper deals chiefly with the sociological aspect. There is a short historical introduction, listing contributions in the field of sociology originating in the psychoanalytic technique. Six lines of development have occurred. The first is the approach to culture through psychoanalytic experience; the second is the analysis of the social situation—for instance, the effect of an unsatisfactory mother-daughter relationship upon the development of personality; the third line of development is emphasis upon social problems as products of psychopathic maladjustment; the fourth line of approach has been through the interaction of endocrinology with social-psychiatric thinking; the fifth is the neurological approach, which seems to be far away from the specialized interest of the sociologist; and the sixth approach has been through clinical psychiatry, chiefly through a functional study of mental disease, influencing the sociologist. The author does not feel that it has contributed in proportion to the contribution of psychoanalysis. He points out that there are three lines of research which are most promising and of great utility: (1) the social-psychiatric investigation of childhood experience; (2) the relation of neurosis and maladjustment to social environment; and (3) least developed and most difficult, the social-psychiatric investigation of cultural antagonism.—*L. S. Selling* (Wayne).

3317. Hamburger, —. *Unterschwelligkeit und bedingter Reflex in der Neurose*. (Subliminality and the conditioned reflex in neurosis.) *Wien. med. Wschr.*, 1933, 83, 776.—In reference to the work of O. Marburg, the author points out that the role of the conditioned reflex in the mechanism of neuroses has been known for 20 years. (See studies by Czerny, Ibrahim, Moro and Hamburger.)—(Courtesy *Année psychol.*)

3318. Harreveld, A. van, & Kok, D. J. *Über experimentelle Katalepsie durch sinusoidalen Wechselstrom*. (Experimental catalepsy produced by

alternating electric currents.) *Arch. néerl. Physiol.*, 1934, 19, 265-289.—An alternating current sent through the brain of the dog causes a state of catalepsy which resembles that described in the case of bulbo-capnin poisoning. If the electric current is slowly increased this state passes into a state of electro-narcosis. In passing over again from the state of electro-narcosis to the normal state the dog passes through a cataleptic stage which may last for a considerable period of time. These phenomena support the hypothesis that experimental catalepsy caused by bulbo-capnin poisoning arises from partial paralysis of the c.n.s.—C. P. Stone (Stanford).

3319. Harshman, L. P. **Indiana's program for the feeble-minded.** *Indiana Bull. Char. Correct.*, 1935, No. 217, 481-485.—A historical study of the admission rates to the Indiana institution for the feeble-minded.—C. M. Louttit (Indiana).

3320. Henry, G. W. **Constitutional factors in psychosexual development.** *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 287-300.—Physical and psychiatric examinations were carried out on 228 psychotic patients grouped according to the predominance of heterosexual, homosexual or narcissistic tendencies. The homosexual and the narcissistic patients tend to have dysplastic constitutions and arrested sexual development. These constitutional deviations suggest inadequacies at the physiological level which may be important factors in determining libidinous fixation and the regression to the childhood modes of psychosexual gratification such as are observed in the schizophrenic.—D. G. Marquis (Yale).

3321. Hincks, C. M. **Mental hospitals in the depression.** *Ment. Hlth Observ.*, 1935, 3, No. 3, 1.—Discussion of the findings of a survey recently made by the National Committee for Mental Hygiene among the majority of the state hospitals of the country. "While most of them reported a rise in first admissions and re-admissions, many of which were attributed to the economic situation as a precipitating factor, such increases were not, on the whole, significant enough to warrant the belief that the depression has exercised a dominant influence on hospital admissions." The depression has had unfavorable consequences in the prevalent condition of acute over-crowding, in curtailment of research and therapeutic activities, and in the resurgence of political interference in institutional affairs, but these are compensated for, in part, by constructive economies, improvement in the caliber of nursing and attendant personnel, and aid from public works appropriations for hospital construction.—R. H. Brown (Clark).

3322. Hoche, A. **Handbuch der gerichtlichen Psychiatrie.** (Handbook of legal psychiatry.) (3rd ed.) Berlin: Springer, 1934. Pp. vii + 567. RM. 45.—This edition has been largely rewritten. The first section, Penology, by Aschaffenburg, includes new material on the laws concerning dangerous habitual criminals and juvenile delinquents, measures for safety and improvement, and the work of the official penological commission. The second section, The

Psychoses and Civil Law (v. Gruhle), is entirely rewritten and contains an extensive consideration of accident legislation and the sterilization law. In the third section, Hoche discusses General Legal Psychopathology, while in the fourth, on Special Legal Psychopathology, Lange takes up the particular diseases of importance in criminology.—M. E. Morse (Baltimore).

3323. Hoskins, R. G., & Jellinek, E. M. **The schizophrenic personality with special regard to psychologic and organic concomitants.** *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 211-233.—"Perhaps the most significant fact" emerging from the Worcester State Hospital cooperative research in schizophrenia is that the schizophrenic is in many respects a highly variable individual and that the variability from individual to individual within the group likewise is greater than normal. This variability is apparent in both physiologic and psychologic functions. In all functions under the control of the autonomic nervous system, sluggishness in adaptive reactivity seems to be characteristic.—D. G. Marquis (Yale).

3324. Jenkins, R. L., & Ackerson, L. **The behavior of encephalitic children.** *Amer. J. Orthopsychiat.*, 1934, 4, 499-503.—The behavior which appears most sharply to differentiate encephalitic children from the non-encephalitic clinic population is summarized under six headings. Most characteristic is the report by parents and other associates that the child's personality has changed. This change includes diminished emotional stability, manifested by changeable moods, irritability, and crying spells. There is typically an impulsive and pugnacious element manifested by quarrelsomeness and by temper tantrums, disobedience and a defiant attitude. These children are typically restless, even during sleep. Their parents describe them as nervous. Whenever this type of behavior is met with in a child, the possibility of encephalitis should be seriously considered.—J. J. Carlson (Aurora-on-Cayuga, N. Y.).

3325. Jewell, A. A. **Birth injury in relation to mental deficiency.** *Proc. Ia Acad. Sci.*, 1933, 40, 191.—The study of birth injury as a cause of feeble-mindedness is comparatively new. The mental growth of these children begins later and continues longer than that of other defective children. Muscle training is valuable. Such studies should lead to a better understanding of the relation of adjustment to cerebral structure.—B. Wellman (Iowa).

3326. Kauders, O. **Psychiatrie, Psychotherapie und Konsequenzen.** (Psychiatry, psychotherapy, and their results.) *Wien. med. Wschr.*, 1933, 83, 1084-1085.—The author points out the contributions which psychiatry has made to psychotherapy, and the results of these contributions. Certain contributions (Kretschmer's theory of types and temperaments, studies on the biology of heredity, and on twins) have led to an appreciation of the importance of hereditary factors and their mutual relations. Besides depth analysis there must be breadth analysis to determine the organization and position value of the factors which constitute the character of the patient. The

direction in the character development of an individual is indicated by dispositions and their carefully analyzed evolution.—(Courtesy *Année psychol.*)

3327. **Kinnmark, F.** Fall av dubbelsidig chorea med hallucinos. (A case of bilateral chorea with hallucinations.) *Svenska Läkartidn.*, 1935, 32, 56-59.—A 69-year-old patient with dementia arteriosclerotica and subsequent development of symptoms of chorea.—V. Coucheron-Jarl (Mooseheart Laboratory for Child Research).

3328. **Kronfeld, A.** Gibt es einen Tod an Neurose? (Is there death from neurosis?) *Psychother. Prax.*, 1934, 1, 129-139.—P. Krieger (Leipzig).

3329. **Kubo, Y.** A study of feeble-minded children. *Jap. J. appl. Psychol.*, 1934, 3, 117-129.—A preliminary study in which 18 feeble-minded children of 8 to 14 years were tested with the conditioned reflex experiment of Yarmolenko, with Rorschach's ink-blot test, and with a character test.—R. Kuroda (Keijo).

3330. **Lellep, K.** On the simulation of psychogenous diseases. *Folia neuro-esthon.*, 1932, 13, 49-58.—According to the author, one cannot distinguish symptoms of psychogenic or simulated origin from the possible coexistence of the simulation and the disease. The simulation can be affirmed only by the disappearance of the symptoms or the confession of the simulator.—(Courtesy *Année psychol.*)

3331. **Leonhard, K.** Atypische endogene Psychosen im Lichte der Familienforschung. (Atypical endogenous psychoses studied in the light of family case histories.) *Z. ges. Neurol. Psychiat.*, 1934, 149, 520-562.—Family case histories of hospitalized patients clearly diagnosed as having atypical psychoses were studied over a long period of time. There did not seem to be any clear-cut case of schizophrenia or of manic-depressive insanity. To determine the degree of the results of a two-fold hereditary taint, families in which there had simultaneously appeared cases of both manic-depressive insanity and schizophrenia were also studied. It is concluded by the author that atypical psychoses can have very dissimilar forms of genesis. Some of the cases can be actually interpreted as mixed psychosis, while others with homogeneous heredity represent an entirely new entity.—P. S. de Q. Cabot (Harvard).

3332. **Lewin, B. D.** Analyse und Struktur einer passagären Hypomanie. (Analysis and structure of a transient hypomania.) *Int. Z. Psychoanal.*, 1934, 20, 74-84.—A case of transient hypomania is described and shown to illustrate Freud's view that mania is a fusion of the ego with its super-ego. In this case an oral mechanism made the fusion possible. An infantile observation of sexual intercourse, involving an identification with both parents in coitus, is postulated as a prototype for the hypomanic attack.—S. Rosenzweig (Worcester State Hospital).

3333. **Lindner, T.** Psykoterapien och invärtesmedicinen. (Psychotherapy and internal medicine.) *Svenska Läkartidn.*, 1935, 32, 449-455.—A plea against the dogmatic psychoanalytic "schools of psychotherapy." The author maintains the view

that pathophysiological processes are basic to all nervous disturbances, even if we do not know their nature.—V. Coucheron-Jarl (Mooseheart Laboratory for Child Research).

3334. **Lopes, E.** A alta tardia dos heredo-psicopathos por motivo de ordem eugenica. (Delayed discharge of psychopaths with hereditary mental disease for eugenic reasons.) *Arch. brasil. Hyg. ment.*, 1933, 6, 277-289.—Lopes advocates legislation permitting the staff of a mental hospital to hold, after recovery, patients whose mental disorder has an hereditary basis.—T. V. Moore (Catholic University).

3335. **Lottig, H.** Psychopathische Persönlichkeiten und psychopathische Reaktionen. (Psychopathic personalities and psychopathic reactions.) *Fortsch. Neurol. Psychiat.*, 1934, 6, 489-495.—A concise review of the recent outstanding literary contributions to this field in Germany.—P. Krieger (Leipzig).

3336. **Lundquist, F.** Ett fall av psykogen minnesforlost. (A case of psychogenetic amnesia.) *Svenska Läkartidn.*, 1935, 32, 60-65.—Loss of memory for 38 days, further classified as hysterical amnesia.—V. Coucheron-Jarl (Mooseheart Laboratory for Child Research).

3337. **Masaki, T.** On the phenomena of obsession. *Jap. J. appl. Psychol.*, 1934, 3, 64-92.—A study based on introspective reports of about 130 high school students.—R. Kuroda (Keijo).

3338. **Petersen, W. F., & Milliken, M. E.** The patient and the weather. Vol. 2. Autonomic dysintegration. Ann Arbor: Edwards, 1934. Pp. 530 + xx. \$6.50.—One of a series of volumes which aims to demonstrate the intimate relationship between disease symptomatology and passing meteorological events. In this volume the author considers particularly the "vegetatively stigmatized." Among the topics treated are focal infection, headache, epilepsy, eclampsia, gastric ulcer, urticaria, asthma, ear and tooth diseases. Of special interest to psychologists is a chapter on neuroses. Bibliographies but no index.—D. Shakow (Worcester State Hospital).

3339. **Pilcz, A.** Zur Konstitution der Süchtigen. (The constitution of addicts.) *Jb. Psychiat. Neurol.*, 1934, 51, 169-179.—The hereditary conditions in manic-depressives and in narcotic addicts are entirely different both qualitatively and quantitatively. A certain antagonism appears to exist between the two innate dispositions.—P. Krieger (Leipzig).

3340. **Polter, K. H.** Musik als Heilmittel. (Music as an aid to therapy.) Düsseldorf: Nolte, 1934. Pp. 59.—R. R. Willoughby (Clark).

3341. **Preston, K. A.** Mental ability regained. *Train. Sch. Bull.*, 1935, 31, 166-172.—Loss of mental ability among mentally deficient persons in the later years is rather uncommon, while subsequent recovery of such losses is very unusual. The case is reported of a woman who lost and regained mental ability after the age of fifty. She was born in 1872; her scores, converted into mental age, varied from 6.1 to 6.3 during her first year at Vineland. In 1916 the figure was 6.8 years; in 1923, 5.0 years; in 1925, 4.8;

in 1927, 4.9; in 1928, 4.8; in 1931, 5.5; in 1934, 6.2. Thus her record went from a high level of 6.8 to a low of 4.8, with a return to 6.2. Records reveal no serious illness. The only physical correlates discernible were hand grip and vital capacity. It seems not entirely impossible that continued inhibition of a conscious activity might cause a temporary deficiency in mental alertness, with return to former level as soon as habituation had precluded the practice of further inhibition.—*E. M. Achilles* (Columbia).

3342. **Schroeder, P. Ueber Halluzinationen.** (Hallucinations.) *Nervenarzt*, 1933, 6, 561-566.—Errors in this problem arise from inclusion of all hallucinations under the same category and drawing general conclusions from a single type; assumption of the identity of hallucination and perception and of an essential difference between "genuine" and "pseudo" hallucinations; and ascribing hallucinations to cortical irritation. One must differentiate: the cortical sensory symptoms of brain disease (photomata, etc.); delirium, dreams, day dreams and all experiences freed from the control of sensory impressions; illusions arising from mistaken identity and misinterpretation; true hallucinations, which are a symptom of the psychotic phenomenon that thinking and action are experienced as processes alien to the patient's own psychic life; and fantasizing (paranoia phantastica). The causes of the last two varieties are largely unknown. The usual assumption that hallucinations are a primary, unitary symptom must be abandoned.—*M. E. Morse* (Baltimore).

3343. **Small, V. R. I knew 3000 lunatics.** New York: Farrar & Rinehart, 1935. Pp. 273. \$2.50.—A popular presentation of some of the author's experiences during six years on the staff of a mental hospital.—*M. H. Erickson* (Eloise Hospital).

3344. **Ssouhareva, G., & Einhorn, D. Les phénomènes psychiques résiduels chez les enfants après lésions traumatiques de la tête.** (Residual mental phenomena in children following traumatic head lesions.) *Z. Kinderpsychiat.*, 1935, 1, 165-176.—Part I, symptomatology, by Einhorn.—*D. Shakow* (Worcester State Hospital).

3345. **Thompson, L. A. Mental hygiene—a brief guide to better self-understanding.** Columbus, Ohio: School and College Service, 1934. Pp. 96. \$.30.—This booklet is intended for use in grades 8-12. Suggestions for discussions are given in lists of questions and topics. A brief rating scale is included.—*R. Goldman* (Clark).

3346. **Tramer, M. Tagebuch über ein geisteskrankes Kind.** (Diary on a psychotic child.) *Z. Kinderpsychiat.*, 1935, 1, 187-194.—The third section of this diary. It covers the first three-quarters of the second year, with numerous comments by the author.—*D. Shakow* (Worcester State Hospital).

3347. **Van Bogaert, L. Psykiske forstyrrelser ved begrænsede læsjoner af den hypothalamo-pedunkulære region.** (Mental disturbances due to limited lesions of the hypothalamic-peduncular region.) *Hospitalstidende*, 1935, 78, 197-210.—A contribution

to the study of the subcortical mental functions. The discussion concerns five clinical cases reported in detail. References are made to a bibliography of 36 titles.—*V. Coucheron-Jarl* (Mooseheart Laboratory for Child Research).

3348. **White, W. A. Man, the great integrator.** *Science*, 1935, 81, 237-243.—The writer discusses the integration of knowledge from all fields of science, the significance of this movement for our understanding of man, and the contributions of psychiatry to principles developed in other fields. The concept of the organism in terms of a "constant flux of energies without rest or equilibrium at any point," as opposed to one in terms of static pictures, the discovery of the unconscious, the concept of "reciprocal relations of the world within and the world without," and the inapplicability of dimensions or measurement in psychology are outlined. The contributions of psychiatry to the principles of the "reciprocal relations of the world within and the world without" and of the regression of man's functions "through the period of childhood, both individual childhood and the childhood of the race" in mental disease are discussed. The writer points out the significance to psychiatry of the biological experiments "in the modification of animals by various changes in their environment" and of the concept that hereditary possibilities are limited by particular environmental conditions.—*R. H. Brown* (Clark).

3349. **Williams, C. L. Some problems for mental hygiene and state hospitals.** *Indiana Bull. Char. Correct.*, 1935, No. 217, 478-481.—Questionnaire returns showed that mental-hygiene training for teachers was unsatisfactory in the higher educational institutions in Indiana.—*C. M. Louttit* (Indiana). [See also abstracts 3249, 3253, 3281, 3365, 3372, 3374, 3453.]

PERSONALITY AND CHARACTER

3350. **Adler, A. Ueber das Wesen und die Entstehung des Characters.** (The nature and the origin of character.) *Int. Z. Individ.-Psychol.*, 1935, 13, 29-30.—Statement of the views of Adler on some of the topics treated by Gemelli (see IX: 3355) and a favorable evaluation of Gemelli's views.—*O. N. de Weerdt* (Beloit).

3351. **Boda, E. de. Pour la solution du problème psychologique du génie.** (The solution of the psychological problem of genius.) *J. Psychol. norm. path.*, 1934, 31, 635-640.—Investigations dealing with the nature of genius should really be concerned with the question of social evaluation. Is genius a specific ability? At any rate it is characterized by superior intelligence. Three groups of factors constitute the general intellectual pattern: (1) Special intellectual capacities involved in observing particular logical, mathematical, chemical and psychological relationships. (2) General intellectual capacities of an analytical critical nature. (3) A general group subdivided into strictly mental factors indispensable to all mental processes and a large group of non-intellectual but conditioning factors. General intellectual

capacities involve the ability to note the crucial issue at stake, the ability to examine deeply any problem in relation to fundamental principles, and the ability to synthesize. Coordination and cohesion of analytical processes are required of genius. Originality, novelty, spontaneity and imagination are subsumed under the capacities outlined above. Genius may become psychopathic, and when it does there is an absence of that creativeness which, when present, is essentially of a positive nature.—*P. S. de Q. Cabot* (Harvard).

3352. Dellaert, R. *L'intelligence des anormaux du caractère*. (The intelligence of persons abnormal in character.) *Année psychol.*, 1934, 34, 200-216.—53 subjects aged 10 to 18 years, comprising feeble-minded, unstable, epileptic, myxedemous, hemiplegic, spinally disordered, and crippled, were analyzed with respect to their conspicuous characteristics. The Binet, Pintner-Paterson, Porteus, Healy picture completion, and Vermeylen picture test were administered to the group. Intellectual inferiority is not sufficient to explain behavior difficulties. A complex correlation exists between inferior intelligence and conduct, due to bad, useless habits and poor family environment. Inferiority is more marked on performance than on verbal tests. Performance tests measure aptitudes with respect to social relations, and abnormal characteristics are due to poor social intelligence. The use of performance and picture completion tests is advocated for the examination of delinquents.—*J. Steinberg* (Columbia).

3353. Dessoir, M. *Character types*. *Character & Pers.*, 1935, 3, 214-221.—The author discusses very briefly the influence of writers of the seventeenth and eighteenth centuries (Schiller, Shakespeare and Goethe) upon modern concepts of personality. The result of such writings has been to regard character as a mosaic-like arrangement of separate traits, as illustrated in our various notions of typology. But neither a typology according to inherent qualities nor one based on formal functions is entirely adequate, for each fails to recognize the essential thing in personality, namely, the whole attitude of the individual toward life. Therefore, the author proposes three classes of personality defined in terms of relation to life: (1) the *Seinsmensch* (the Being-Man), illustrated by the lowest level of the negro described by Schweitzer; he is only semi-conscious, has no goal in life, merely goes on living. (2) The *Lebensmensch* (the Life-Man); to live and live comfortably is extremely pleasant and to die is excessively unpleasant. All he wants is a sufficient livelihood, a loving wife, a throng of happy children. All social values (art, religion, etc.), must permit an easy-going existence. (3) The *Leistungsmensch* (the Achievement-Man); here the dominant value in life lies not in the physical welfare of the individual but in achieving something that will advance humanity. This individual needs to be alone; he is at home only in the realm of values; reality exists only in the spirit.—*M. O. Wilson* (Oklahoma).

3354. Diethelm, O. *The personality concept in relation to graphology and the Rorschach test*. *Proc.*

Ass. Res. nerv. ment. Dis., 1934, 14, 278-286.—By means of handwriting and the Rorschach test the personality as a whole can be studied from a dynamic point of view. The shortcomings of such study are the tendency to be guided by instinctive instead of objective interpretation, and, on the other hand, the attempt to measure the characteristic features too exactly. The important diagnostic aspects of the tests are summarized.—*D. G. Marquis* (Yale).

3355. Gemelli, A. *Ueber das Wesen und die Entstehung des Characters*. (The nature and the origin of character.) *Int. Z. Individ.-Psychol.*, 1935, 13, 7-28.—A German translation from the Acts of the Italian Society for the Progress of Science, reports of the meetings of September 1929. A historical review of the modern approaches to the understanding of human personality is given as these have been presented in biological, sociological, psychiatric, and psychological aspects. German authorities are chiefly reviewed. Gemelli rejects mechanistic, causally conceived explanations and defends those views that recognize personality traits as acquired, variable, and subject to change and correction. He is interested in developing a comprehensive philosophic interpretation of the problems and expressions of personality that is teleological, of practical therapeutic value, and at the same time in harmony with a recognition of biological evolution.—*O. N. de Weerd* (Beloit).

3356. Hopkins, L. T. *Arguments favoring integration*. *Teach. Coll. Rec.*, 1935, 36, 604-612.—An address which considers four major points: (1) What is integration? (2) What are the characteristics of the overt behavior of an integrated individual? (3) How does the normal individual usually achieve integration? (4) What changes in the curriculum does the concept of integration imply?—*J. M. Stalnaker* (Chicago).

3357. Hunt, J. R. [Ed.] *The biology of the individual*. Baltimore: Williams & Wilkins, 1934. Pp. xv + 323. \$6.00.—The volume contains the proceedings of the fourteenth meeting of the Association for Research in Nervous and Mental Disease. The 18 contributions, abstracted separately in this issue, deal with basic aspects of the problem of personality—heredity, growth, environment and constitution, and the more complex psychological and sociological aspects. 49 illustrations, 21 tables, index.—*D. G. Marquis* (Yale).

3358. Ikemi, T. *The finger-print and character*. *Jap. J. appl. Psychol.*, 1934, 3, 40-63.—No particular relation between finger-prints and character was ascertained.—*R. Kuroda* (Keijo).

3359. Kahn, E. *Constitutional aspects of personality types*. *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 138-149.—The concept of two extreme types of body-build is fairly well established; one should, however, not commit the error of assuming that a specific body-build determines a specific personality trait. The correlation cannot be denied, but their causal contingencies are to be sought in biologically determined potentialities which may be called leptophilic and pyknophilic. In the functional reali-

zation of these potentialities there can be recognized a bipolar contrast in psychological attitudes which one may call ego type and environmental type, corresponding to Jung's introvert and extravert respectively.—*D. G. Marquis* (Yale).

3360. **Manson, R. H., & Pear, T. H.** The conversation as a basis for judgments of personality. *Character & Pers.*, 1935, 3, 222-229.—Various aspects of the conversation as a basis for judging personality are discussed. These aspects include the motives in seeking, directing or passively enjoying it; intensity of tone (conversational, controversial tone, etc.); initiation and interruption of the conversation; emotional and feeling qualities expressed; the formal interview; reaction of the public to the radio; gossip; tact, and its possible dependence upon muscular skill and speech-habits; and intelligence, experience and character of the participants.—*M. O. Wilson* (Oklahoma).

3361. **Matsuyuki, O.** The traits of character of superior workers. *Jap. J. appl. Psychol.*, 1934, 3, 33-39.—Carelessness about fame and wealth, concentration, testiness, being absorbed in work though very slow to commence, strong self-confidence, stubbornness, and boldness with respect to work are attributed to superior workers, and these are also universally acknowledged as the so-called manners of experts.—*R. Kuroda* (Keijo).

3362. **Schilder, P.** Personality in the light of psychoanalysis. *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 264-277; *Psychoanal. Rev.*, 1935, 22, 36-48.—The author discusses some of the underlying principles of psychoanalysis, not necessarily explicitly formulated in that theory. Psychic life follows its own laws, irrespective of whatever may go on in the organism. The personality is a continuous causal unity, and experiences or complexes or conditioned reflexes can have no independent meaning. The development of personality is discussed in the Freudian structuralization of ego, id and super-ego, with special reference to the anal, oral and genital characters.—*D. G. Marquis* (Yale).

3363. **Spielmann, L.** Wechselwirkung von personaler Finalität und exogenen und endogenen Kräften. (Reciprocal influence of personal finality and exogenous and endogenous forces.) *Int. Z. Indiv.-Psychol.*, 1935, 13, 47-57.—The author contrasts biological inheritance theories, including Gobi-neau's Aryanism and race theories, with various theories of the environmental origin of racial and individual characteristics. Germ plasm and environment are both rejected as insufficient, since special talents and the perverse and abnormal traits seem frequently to develop in contrary surrounding conditions, or fail to appear in favorable ones. The drive to self-expression as a "personal finality" must be included as a factor in any equation expressive of the influences underlying character and personality. The origin of this drive, which is always and only explicable in teleological and social terms, is found in the training and experiences of childhood and in compensations and over-compensations of organ-inferiorities. These forces, biological and individual, influence

each other in the development of the individual's physical and mental characteristics.—*O. N. de Weerd* (Beloit).

3364. **Watanabe, T., & Hasegawa, M.** A study of main factors determining the personality-value. *Jap. J. Psychol.*, 1934, 9, 1039-1068.—The main factors determining the personality value are (arranged in order) achievements, reputation, intelligence, affection, and morality in the male subjects; and morality, reputation, affection, achievements, and intelligence in the female ones. The degree of importance of these factors varies according to (1) the evaluating person: even the same individual evaluates a person differently in his own different stages of development; and to (2) the evaluated person: the same person may be evaluated differently in his different stages of development. Generally speaking, the male subjects tend to determine the degree of greatness mainly by the achievements or reputation, which are greatly subject to environmental influence, and the female ones do it mainly according to morality, which rather belongs to disposition. It is interesting to note that this difference bears some resemblance to that which exists between extraversion and introversion.—*R. Kuroda* (Keijo).

[See also abstracts 3302, 3303, 3323, 3394, 3451, 3461, 3472.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

3365. **Alexander, F.** The psychiatric approach to community welfare problems. *Indiana Bull. Char. Correct.*, 1935, No. 217, 487-492.—Prevention requires more detailed knowledge than therapy. We lack detailed knowledge in the field of mental disorders. Also, here preventive measures are essentially a problem of training and therefore are not under control of experts. Because of these things, mental hygiene must be considered an idea, a program for future development and research, more than anything else.—*C. M. Louttit* (Indiana).

3366. **Allport, F. H.** Individuals and their human environment. *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 234-252.—Social psychology cannot study the reaction of individuals to customs, institutions, etc.; the individual reacts, in the true sense of the word, only to stimuli given by other specific individuals. The field of inquiry is thus reduced to the problem of the behavior of individuals in groups. It is characteristic of an institutional situation that the behavior of the individuals is limited in one or several ways. This conformity may be illustrated by the J-curve distribution of traits in such a situation as contrasted with the normal distribution resulting from the unlimited expression of the natural endowments of the individuals.—*D. G. Marquis* (Yale).

3367. **Bahle, J.** Einfall und Inspiration im musikalischen Schaffen. (Association and inspiration in musical creation.) *Arch. ges. Psychol.*, 1934, 90, 495-503.—Eight selected poems were sent to 30 recognized composers with the request that they set one of them to music and write a detailed account of the creative process. 26 of the 30 composers coöperated.

This paper deals only with an analysis of the reports with respect to the role of "sudden ideas" (*Einfälle*) and inspiration. Composers have two different interpretations of the term inspiration. For one group, it is synonymous with the concept of "sudden idea"; for the other it refers to the feeling experiences which precede the "idea." Numerous pertinent quotations from various composers are included.—*E. L. Kelly* (Connecticut State).

3368. Bégouen, H. A propos des Vénus paléolithiques. Lettre ouverte à M. G.-H. Luquet. (Observations concerning the paleolithic Venuses. Open letter to G. H. Luquet.) *J. Psychol. norm. path.*, 1934, 31, 792-797.—A reply to a previous article on this subject by G.-H. Luquet, whom the author describes as an advocate of the theory of art for art's sake. This is essentially aristocratic and would seem to be true only of a race intellectually much more advanced than seems possible at the time when these sculptures were reputed to have been made. Art for utilitarian purposes is a much more reasonable theory when we are discussing primitive races. Insufficient attention has been paid to the representation of the organs of reproduction, for the role of the mother and its symbolical significance in the lives of the people are important in any consideration of these valuable works of art.—*P. S. de Q. Cabot* (Harvard).

3369. Bell, R. Public school education of second-generation Japanese in California. Stanford Univ.: Stanford Univ. Press, 1935. Pp. 116. \$1.00 (paper); \$1.50 (cloth).—This monograph is one of a series on the vocational and educational problems of American-born Japanese. The author describes the background for the discriminatory legislation and segregation of Japanese-Americans, gives the history and development of Japanese-language schools, and discusses the effect of the latter on group solidarity and moral control. The main questions considered are those related to the intellectual ability and school achievement of the Japanese-Americans compared with white Americans. On the basis of tests standardized for American, English-speaking children, "the best guess . . . is that there is little quantitative difference in intelligence level . . . and that . . . Japanese-Americans, handicapped in linguistic performance, excel in mental activities based upon concrete visually presented situations and in those involving memory, acuity of visual perception, and tenacity of attention." In standardized achievement tests at the elementary school level the Japanese-Americans show a slight inferiority in reading and a slight superiority in spelling and arithmetic. School marks at the high-school level show them to excel at all grade levels from the seventh through the twelfth and in all school subjects. The author points out that this may be accounted for by many things besides the actual school achievement which teachers' marks register. Bibliography and index.—*D. Shakow* (Worcester State Hospital).

3370. Bues, H. W. The construction and validation of a scale to measure attitude toward any prac-

tice. *Bull. Purdue Univ.*, 1934, 25, 64-67.—Two equivalent forms of such a scale are given. As a matter of validating the generalized scale some data on the attitude of certain groups of young people toward "petting" and "drinking" are presented.—*O. C. Trimble* (Purdue).

3371. Caldwell, O. W., & Lundeen, G. E. Do you believe it? New York: Doubleday, 1934. Pp. 317. \$3.00.—(Not seen).

3372. Coy, W. The defective delinquent. *Indiana Bull. Char. Correct.*, 1935, No. 217, 474-478.—Includes the definition, characteristics, source and treatment of the defective delinquent.—*C. M. Louttit* (Indiana).

3373. Curry, R. O. L., & Richardson, E. G. The application of the cathode-ray oscillograph in speech analysis. *J. Physiol.*, 1935, 83, 45-46P.—By means of this apparatus sounds may be classified and analyzed according to their basic wave form.—*M. A. Rubin* (Clark).

3374. Doll, E. A. Vineland social maturity scale. *Train. Sch. Bull.*, 1935, 32, 1-7.—The need for a scale of social development has long been felt. The scale now being made at Vineland for the measurement of social competence from birth to adult life is given in its "Experimental Form A" as revised to March 15, 1935. The scale consists of a series of socially significant detailed performances arranged in order of their normal development with increasing age. 117 items are included. It may be necessary to substitute, rearrange, or add items as further experience may suggest. At present the scale is weak in its upper ranges. It is useful in distinguishing between mental retardation with social incompetence (feeble-mindedness) and mental retardation without social incompetence. It affords assistance in child guidance and child training. The social status of the individual is the basic point of departure for a large variety of practical uses in scientific studies in those social sciences where human adjustment is a consideration.—*E. M. Achilles* (Columbia).

3375. Dorsey, J. M. The psychology of the person who stutters. *Psychoanal. Rev.*, 1935, 22, 25-35.—To understand the psychology of stuttering one has to understand the original nature of the speech act and the original nature of the person who stutters. Originally speech was a phonetic imitation of experience in man. Language depends on metaphor for its growth, since it is imitative. The adjustment of personality depends upon the happy balance of selection, rejection and maintenance functions of the organism. There are two parts of speech: the original act and habit must be considered the first part, with the creative element plus the genesis of stuttering and an under-emphasis of urethral libido cathexis; the second is the repetition element, anal libido. Thus the maintenance of stuttering arises from an over-emphasis of the anal libido cathexis in a person of relatively under-emphasized urethral libido cathexis. Personalities present predisposition toward stuttering when their creative characteristics function less than their tolerance and loyalty characteristics. With over-emphasis of the anal libido cathexis, the prog-

nosis is poor; stuttering is more common in males, and one can trace this to the fact that in man the mouth assumes more uniquely the meaning of a creative organ than in woman. The immaturity of personality development of practically all stutterers appears to be related to their lack of genital primacy of libido cathexis.—*L. S. Selling* (Wayne).

3376. *Earhart, W.* The meaning and teaching of music. New York: Witmark, 1935. Pp. 262. \$3.00.—*R. R. Willoughby* (Clark).

3377. *Fogerty, E., Turner, J. C., Jones, D., MacLeod, E. C., & Pear, T. H.* Speech training: a symposium. *Brit. J. educ. Psychol.*, 1935, 5, 10-40.—A general survey characterizes speech as a sort of clearing house of all the faculties serving man's entire intellectual and moral life. The complex physiological and cerebral activities involved are shown to offer many opportunities for faulty expression. Perfection in speech is needed for both individual and racial survival and improvement. Esthetic factors controlled by breathing and muscular apparatus and their coordination are vital for singing, verse-speaking, drama and oratory. Training in phonetics aims to produce acceptable and conventionally pleasing habits of pronunciation. A speech therapist, in contrast to a teacher of speech and drama, needs a scientific rather than an esthetic training and approach. From the psychological point of view speech training should prepare for constructive discussion and train in techniques to appeal to different types of mind, to expound, suggest, discuss, argue and persuade, and more recently to use the microphone effectively. The act of speaking receives too little attention from psychologists.—*K. M. Cowdery* (Stanford).

3378. *Gaudet, F. J., Harris, G. S., & St. John, C. W.* Individual differences in penitentiary sentences given by different judges. *J. appl. Psychol.*, 1934, 18, 675-680.—An examination of 7748 sentences given by six judges for crimes of greater frequency shows differences in length of sentence, percentage of imprisonments, and tendencies to sentences in multiples of three months.—*R. S. Schultz* (Psychological Corporation).

3379. *Giese, F.* Individuum und Epoch in Tak-tierbewegungen bei verschiedenen Komponisten. (The individual and the epoch in baton movements associated with various composers.) *Arch. ges. Psychol.*, 1934, 90, 380-426.—32 subjects were each given two batons and asked to beat time to 35 musical selections representing 23 different composers. These experiments were conducted in a dark room and the subjects were told to move the baton (or batons) in such a way as to try to convey the meaning of the music. A flashlight bulb mounted on the end of each baton made possible photographic recording of the beating movements. An analysis of the records showed: (1) marked personality differences in the movements of the various subjects, (2) a tendency for different works of the same composer to be interpreted by the same movement pattern, and (3) a similarity of pattern for different composers of the same musical epoch. Of especial interest was the

finding of different spatial characteristics in the movements associated with the works of the various composers.—*E. L. Kelly* (Connecticut State).

3380. *Gillin, J. L.* Criminology and penology. (Rev. ed.) New York: Appleton-Century, 1935. Pp. 640. \$4.00.—*R. R. Willoughby* (Clark).

3381. *Grice, H. H.* The construction and validation of a generalized scale to measure attitude toward defined groups. *Bull. Purdue Univ.*, 1934, 25, 37-46.—Forms A and B of a generalized attitude scale for defined groups are presented, together with a description of the procedures involved in their construction and validation. Some data on attitudes toward certain racial groups are included.—*O. C. Trimble* (Purdue).

3382. *Hattwick, M. S.* Are we giving the child a chance musically? *Proc. Ia Acad. Sci.*, 1933, 40, 197-198.—37 four- and five-year-old children were given 28 practices on a song over a period of 14 days, after which a dictaphone recording was made. Most children sing at pitch levels and with ranges of their own choosing. Present songs in text and teaching are too high in pitch level and range for the majority of children.—*B. Wellman* (Iowa).

3383. *Healy, W.* Crime and the individual. *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 253-263.—The main classes of variables which are known to be effective in producing delinquency and crime are (1) the physical and mental equipment of the individual, (2) the formative life experiences, (3) the formed reactive tendencies, and (4) the environmental influences and social pressures. Observations relating to the importance of the various factors are briefly summarized.—*D. G. Marquis* (Yale).

3384. *Henderson, M. T.* Substitution of time for stress in performance of measure accent in piano music. *Proc. Ia Acad. Sci.*, 1933, 40, 188-189.—Very definite time organizations occur within the measure of a given musical selection apparently for the purpose of measure accent.—*B. Wellman* (Iowa).

3385. *Hevner, K.* Expression in music: a discussion of experimental studies and theories. *Psychol. Rev.*, 1935, 42, 187-204.—The most important problem in the psychology of esthetics is the meaning or expressiveness of certain lines, colors, rhythms or sounds. In music, however, listeners disagree as to their interpretations, especially when long musical compositions are listened to. But if each subject is allowed to choose freely from a long list of adjectives arranged in groups, much greater consistency is obtained. Disagreement could be avoided experimentally by insuring that two disturbing factors are minimized, viz., the subject's own temperamental condition and the ambiguity of descriptive terms. Studies with adjective groups indicate a surprising uniformity and consistency in the apprehension of musical meanings; this holds for all grades of listeners, but musically trained listeners distinguish with greater ease. If, however, minor qualities, for example, are confined to single chords, then the problem is too difficult for all but the trained subjects. The

associations leading to expressiveness in music, i.e. between affective states or attitudes and certain musical experiences, have the same sources as other associations. The symbolism of music has been demonstrated to be based on a complex but orderly system, and therefore should yield discoverable principles. But a fatal error in previous work has been the selection of unsatisfactory musical units of meaning, such as the chord. Rhythm is important and temporal relationships and sequence are much more vital than in verbal symbolism. The most logical system yet suggested is Ferguson's, which assumes two basic elements, "motor suggestion" and "stress suggestion." The author believes that experiments aimed at these elements will yield the principles for a system of meanings in music.—*A. G. Bills* (Chicago).

3386. Hion, V. *Zur Aetiologie, Symptomatologie und Pathogenese des Stotterns*. (On the etiology, symptomatology and pathogenesis of stuttering.) *Folia neuro-esthona*, 1932, 12, 190-195.—Report on statistical observations of 700 stutterers, of whom only 295 could be used. The number of stutterers is least when there are two children in the family, most when there is only one, and it increases with more than three children. Stuttering is encountered most frequently in the first and the last born. A graph indicates the frequency of stutterers according to the birth order from 1 to 6.—(Courtesy *Année psychol.*)

3387. Hirose, K. *An experimental study on the principal pitch in the vibrato*. *Jap. J. Psychol.*, 1934, 9, 793-845.—*R. Kuroda* (Keijo).

3388. Hollingworth, H. L. *The psychology of the audience*. New York: American Book, 1935. Pp. 232. \$2.50.—The author of this book treats the craving for an audience as one of humanity's fundamental needs. A preliminary analysis of the general problem involved in group organization of a hearer-listener variety indicates the focal points to be those of attention, interest, impression, conviction, and direction. After a survey of the various types of audiences, the author treats, in turn, several problems: that of securing the audience through visual and auditory methods; that of holding the audience, maintaining interest, and sustaining rapport; and that of impressing the audience through devices involving visual and oral presentation, including charts, slides, and graphic aids. The author discusses phases of the psychology of persuasion based upon emotional and factual appeal. He gives a short summary of the most common types of fallacies to be found in everyday appeals. The detailed characteristics of the average man are also enumerated. Certain experimental studies on audience effects are cited, including a comparison of results obtained when individuals work alone and in the presence of others. A final chapter deals with a survey of the problem of stage fright and covers a discussion of its causes, together with certain suggestions for its diminution.—*G. E. Brooks* (Rhode Island State).

3389. Humble, E. *The gods in plain garb; a study in psychology*. New York: Putnam, 1935. Pp. 314. \$3.00.—*R. R. Willoughby* (Clark).

3390. Jacobsen, O. I. *An achievement test of dynamic control in music*. *Proc. 1a Acad. Sci.*, 1933, 40, 188.—The power level indicator with readings in decibels was standardized.—*B. Wellman* (Iowa).

3391. Jones, E. *Artistic form and the unconscious*. *Mind*, 1935, 44, 211-215.—A defence of the doctrine that artistic creation springs from the unconscious.—*H. Helson* (Bryn Mawr).

3392. Kainz, F. *Zur Psychologie der ästhetischen Grundgestalten bei Goethe*. (The psychology of the esthetic forms in Goethe's works.) *Arch. ges. Psychol.*, 1934, 90, 427-494.—An attempt to correlate certain aspects of Goethe's temperament and personality with specific characteristics of his literary works.—*E. L. Kelly* (Connecticut State).

3393. Kellar, B. *The construction and validation of a scale for measuring attitude toward any home-making activity*. *Bull. Purdue Univ.*, 1934, 25, 47-63.—Two equivalent scales for the measurement of such attitude are presented and described in detail as to method of construction, reliability, and validity. Measured attitudes of several different groups toward such activities as caring for children, meal planning, and dish-washing are included.—*O. C. Trimble* (Purdue).

3394. Kelley, I. B. *The construction and evaluation of a scale to measure attitude toward any institution*. *Bull. Purdue Univ.*, 1934, 25, 18-36.—In Part I the principles and procedures involved in the construction of such an attitude scale are set forth. Also, copies of two equivalent forms of the generalized scale are included. An experiment in the validity and the reliability of the two forms of the scale is reported in Part II. Data on measured attitudes toward communism, war, Sunday observance, marriage, and divorce, are presented and analyzed. The stated conclusion is as follows: "The generalized scale has a validity and a reliability high enough to make it a reasonably accurate instrument for measuring attitudes of any group toward any institution and for comparison of groups as to mean attitude and the spread of attitude."—*O. C. Trimble* (Purdue).

3395. Kelly, J. P. *Nasal resonance in speech sounds*. *Proc. 1a Acad. Sci.*, 1933, 40, 190.—Nasal resonance was photographed together with a time line. Each vowel has a specific nasal element in its resonance, the duration of which varies directly with the closeness of the vowel. Evidence is presented for the conclusion that the nasal cavities resonate specific frequencies for each vowel.—*B. Wellman* (Iowa).

3396. Kido, M. *On the commutability and limitation of meaning in language*. *Jap. J. Psychol.*, 1934, 9, 1013-1038.—Language stands, the author thinks, for the window through which we can catch a glimpse of the world of common sense, thus enabling us to enjoy life more fully in our community. But how is it that words in our language possess such magical power? If it is permitted to make an analogical expression in dynamic terms, it is due to our mental osmosis in the symbolic process. By the term osmosis is meant the tendency of meanings to be trans-

muted into each other, when in contact even with limited words of special meaning, or when making an idiomatic expression as a whole, while some words are compounded into a phrase. In a good sense this osmotic process of meaning is easily expressed by words which in turn convey the meaning vividly to the mind of the thoughtful reader. The author concludes that the meaning commutation is strained in the context of a sentence having osmotic interaction of words, and the language community is configured in the society of human life by the osmotic intercourse of thoughts unifying the relationship of expression and understanding.—*R. Kuroda* (Keijo).

3397. **Kiefer, O.** *Sexual life in ancient Rome.* New York: Dutton, 1935. Pp. 379. \$5.00.—*R. R. Willoughby* (Clark).

3398. **Kieslinger, G. M.** *Der irdische Aufenthalt und die Erscheinungsform der Toten in europäischen Volksglauben.* (The earthly residence and manifestation of the dead in European folk-beliefs.) *Arch. Anthropol., Braunschw.*, 1933, **33**, 79-149.—From earliest times human imagination in all stages of development has waged a war against the knowledge of the immutability of the dead. Diligent study concerning the manifestations of the dead, of the somatic and somatistic ideas of the "living corpse," provides 419 citations.—*P. Krieger* (Leipzig).

3399. **Kucharski, P.** *Recherches sur les sons de voyelles.* (Investigations on vowel sounds.) *Année psychol.*, 1934, **34**, 159-199.—A critical discussion of existing theories on vowel sounds, also the schema and exposition of an acoustic oscillograph apparatus are given. French and English vowel sounds were analyzed according to frequency vibrations and resonance. The fallacies of the technique employed in this study with respect to that of other studies is discussed. The author concludes that the fact of a whispered language is significant to justify the hypothesis of the duality of vocal mechanisms, in the spoken and chanted language. The pharynx is the resonator and the vocal cords form the intervening oscillator.—*J. Steinberg* (Columbia).

3400. **Lalo, C.** *Valeur esthétique de la symétrie.* (The esthetic value of symmetry.) *J. Psychol. norm. path.*, 1934, **31**, 598-634.—A comprehensive study of esthetic value should be in nature successively mathematical, physiological, psychological and sociological. This method is rarely used because of the comparative infancy of the moral and biological sciences. The mathematical definition of symmetry is accepted in this discussion because of its simplicity. The human mind searches for identity but never finds it entirely. Examples of symmetry are given in the fields of physiology, psychology and sociology. Asymmetry is a representation of movement, while symmetry denotes rest and finality of achievement. In oriental civilizations asymmetry replaces the symmetry characteristic of western civilization. Like children, primitive races have a strong inclination for symmetry, probably because of simplicity of taste and outlook. Science aims at eliminating the irrational from our perceptions, while art tends to foster it.—*P. S. de Q. Cabot* (Harvard).

3401. **Lévy-Bruhl, L.** *Le temps et l'espace du monde mythique.* (Time and space in the mythical world.) *Scientia, Bologna*, 1935, **57**, 139-149.—The myths of primitive people, particularly those of certain recently studied tribes of Australia and of New Guinea, point out relations of time and space which deserve special attention. The mythical period is, in a certain way, indifferent to time, in other words transcendent; it is extra-temporal or pre-temporal. There are no mythical facts which are placed at a definite moment in time. It is the "period" which divides the nature of the mythical world. It is necessary, then, to distinguish between two varieties of ancestors, mythical ancestors who take their origin from the human group or animal group and who are simply created without having any family tree, and the human ancestors who were born and died like the generations which have followed them. From another standpoint it is an intimate relationship, a participation between the human group and its animal or plant totem or the ceremony related to that totem, which is celebrated. These sacred relationships or "local totemic centers" make possible the pseudo-parent or "local" relationships of Spencer and Gillen, which is very important for the life of these natives.—*L. S. Selling* (Wayne).

3402. **Lewin, K.** *Psycho-sociological problems of a minority group.* *Character & Pers.*, 1935, **3**, 175-187.—The author applies the concepts of topological and vector psychology to the study of a minority social group (Jews). The method has the advantages of permitting the psychologist to treat a group as a whole; to take into account the structure, distribution and degree of unity of a social group; and to pass from group to individual problems without having to resort to other concepts. The effect of the constantly shifting background and the possible establishment of a Jewish homeland in Palestine upon the personality of the Jew is discussed.—*M. O. Wilson* (Oklahoma).

3403. **Low, H. B.** *Adventure.* *Peabody Bull.*, 1934, **31**, No. 1, 13-16.—Contains a survey of musical interests and activities in an isolated rural community in Maryland.—*L. Petran* (Peabody Conservatory).

3404. **Meier, N. C.** *Studies in the foundations of artistic aptitude.* *Proc. Ia Acad. Sci.*, 1933, **40**, 195-196.—Eight studies on the beginnings of artistic capacity are briefly described. Four studies, by Daniels, Jasper, Whorley and Williams and Walton, explored the function of esthetic intelligence in children. The other four, by Grippen, Tiebout, Rodgers and Dow, undertook to discover differences between the artistic child and the artistically disinterested child.—*B. Wellman* (Iowa).

3405. **Meloun, J.** *Does drawing skill show in handwriting?* *Character & Pers.*, 1935, **3**, 194-213.—Schoolmasters of each form concerned provided three samples of material: a handwriting specimen of the best pupil in the form with a note on his drawing ability; a corresponding report for the poorest pupil; and one for the best draughtsman with a note on his general scholastic records. A total of 250 children (176 British and 74 Viennese) were the subjects for the experiments. Before analyzing the data, the

author attempted to infer the drawing ability of 57 of the pupils from their writing. The results are: 56% correct; 19.3% directly opposed to judgment of teacher; and 24.6% with varying degrees of divergence from teacher's judgment. Analysis of the experimental results shows that there is a significant correlation between drawing ability and writing ability. However, drawing skill does not improve the quality of penmanship. Intelligence is correlated with both abilities.—*M. O. Wilson* (Oklahoma).

3406. Miller, F. D. The validation of a generalized attitude scaling technique. *Bull. Purdue Univ.*, 1934, 25, 98-109.—A generalized and a specific scale for the measurement of attitude toward teaching are compared on the basis of a sampling of 140 instructors and students in Purdue University. The stated conclusion is as follows: "The generalized scale could be used in place of the specific scale for measuring attitudes, as the validity and the reliability were high enough to indicate this. The generalized scale, too, seems more practical in that one scale could be used to measure several attitudes and separate scales would not need to be purchased or constructed for measuring attitudes."—*O. C. Trimble* (Purdue).

3407. Monro, M. T. Breaking out of prison. London: Methuen, 1934. Pp. 128. 3/6.—*R. R. Willoughby* (Clark).

3408. Mosbacher, E. Untersuchungen zum Sündenbegriff der Naturvölker. (Investigations of the concept of sin among primitive peoples.) *Baessler-Arch. Völkerk.*, 1934, 17, 1-49.—Writings concerning the objective or, better, objectivistic character of sin (as law-breaking) as well as of the individual sinner considered as representative of an entire group, are of psychological importance. Among primitive peoples the feeling of guilt does not stand in the foreground, but dread of the calamitous outcome of an act does. The sinner does not attempt to soothe the indignation of the gods through repentance, or to seek pardon, but wishes merely to abolish the consequences of sin. The question concerning the existence of gods is, for this interpretation of sin, comparatively irrelevant, but it stands in no opposition to it.—*P. Krieger* (Leipzig).

3409. Odebrecht, R. Das Gefüge des religiösen Bewusstseins bei Fr. Schleiermacher. (The structure of the religious consciousness according to Fr. Schleiermacher.) *Bl. dtsch. Phil.*, 1934, 8, No. 4/5.—This is a criticism of modern views concerning Schleiermacher's religious philosophy and an interpretation of the "feeling of simple dependency" concept. "Feeling" or "mood" is the affection-free yet emotional basis of our nature, the "immediate existential condition" in which all temporal experience is consummated—it is, so to speak, the enduring structure of mind. Feeling is not objectively determined but provides for the contrast between ego and world: the "opposition between the existence which is at once consciousness and given in consciousness." Thus the temporally determined ego experiences timelessness; it "has" the immediate and the absolute; it experiences polarity and tension between absolute

particularity and absolute totality; it feels "simply dependent"; it experiences the "feeling of infinity." Nevertheless this out-of-reach ego is dialectically identical with the empirical ego of sensory consciousness. Both poles oscillate and there is no absolute, only becoming, bliss out of which from time to time the impulse to manifestation of the transcendental foundation breaks forth in religion and religious activity.—*G. Wechsler* (Leipzig).

3410. Palcos, A. Notas sobre la psicología de la creación en las ciencias y las artes. (Notes upon the psychology of creation in the arts and sciences.) *Rev. Criminol., B. Aires*, 1934, 21, 693-705.—Creativity is pure mental activity. The inventive, creative mind is not exclusively the function of intelligence. Such activity is apparently innate.—*R. M. Bellows* (Ohio State).

3411. Pichon, E. La logique vivante de l'esprit enseignée par le langage. (The living logic of mental processes revealed through language.) *J. Psychol. norm. path.*, 1934, 31, 680-696.—The study of language is for the psychologist one of the most fruitful fields of investigation. The grammatical structure of a language reveals the logical nature of the mind of man. As an example, terms familiar to the logician, as "substance," "phenomenon," and "quality," have their counterparts in grammar as "substantive," "factive," and "adjective." From a classification of categories one proceeds to one of classes. Each part of speech which is grammatically denoted has its logical analogue.—*P. S. de Q. Cabot* (Harvard).

3412. Przyłuski, J. La plasticité des mots et la cohésion du discours. (The flexibility of words and the cohesion of speech.) *J. Psychol. norm. path.*, 1934, 31, 581-585.—Two principal factors operate in the formation and functions of any language. One, centrifugal, asserts the independence of words; the other, centripetal, ensures a certain coherence of phraseology. As a result of these two forces, mutations and the composition of words can be examined in two different groups. The flexibility of words may vary at successive periods in the history of a language. Examples, chiefly from the Annamese language, are given as instances of agglutination.—*P. S. de Q. Cabot* (Harvard).

3413. Przyłuski, J. Le rythme et l'improvisation poétique. (Rhythm and poetic improvisation.) *J. Psychol. norm. path.*, 1934, 31, 801-808.—A critical study of a recent publication dealing with the songs of the Annamese children. The romantic notions of poetry are today preserved among the people of Annam, who excel in improvisation. Inspiration is not considered as a function of formal education; man is a mere instrument in the hands of an unseen superior force. These particular songs do not belong to celebrations connected with daily toil or with festive occasions, but they do refer to events leading up to the wooing of one's life partner. The study elucidates many data hitherto obscure in the understanding of poetic expression.—*P. S. de Q. Cabot* (Harvard).

3414. Ranulf, S. The jealousy of the gods and criminal law in Athens. A contribution to the so-

ciology of moral indignation. (2 vols.) Copenhagen: Levin & Munksgaard, 1935. Pp. 161; 301. 20 kr.—*R. R. Willoughby* (Clark).

3415. Robinson, F. P., & McCollum, F. H. A critical analysis of reading test scores. *Proc. Ia Acad. Sci.*, 1933, 40, 199.—Speed of reading determines scores on tests more than comprehension ability. Length of the test as a fatigue factor also determines the type of reading.—*B. Wellman* (Iowa).

3416. R  heim, G. The riddle of the sphinx. London: Hogarth, 1934. Pp. 302. 18/—The author reports the theoretical results of field work, particularly among the primitive peoples of Australia, treating his findings from the psychoanalytic point of view. Chapter 1, entitled "The Primal Religion," deals with the ontogenesis of religion, demons, folk tales, and the magic of Central Australia, and the demons of Indo-European peoples. Chapter 2, "Central Australian Totemism" describes totemistic practices, and discusses myths and their songs and ceremonies, with an elaboration of their psychoanalytic content and significance. Chapter 3 discusses the ontogenetic interpretation of culture, in which the psychic development of the individual gives rise to the form, nature, and needs of social development. Chapter 5 deals with the problem of human origins, as suggested in the myths, ceremonies and practices of the natives when studied from the psychoanalytic viewpoint. The final chapter elaborates upon the problems of progress, education, sublimation, retardation, ego-development, and the interrelationships of work and civilization as indicated by the findings of anthropological studies and when considered from the viewpoint of cultural development.—*M. H. Erickson* (Eloise Hospital).

3417. Sayce, R. U. Primitive man and civilised man. *Scientia*, 1935, 57, 53-62.—Many important problems that the future will have to solve depend upon the essential character of what we call primitive peoples. Are they innately inferior to us, or are they capable of assimilating what is best in our culture, and of making important contributions of their own? The evidence from studies of cranial capacity and from intelligence tests is as yet too uncertain to guide us. We know that primitive peoples can produce great men, although we can know little of the effects which they have had on culture in the past. The apparent primitiveness of a culture may really represent a successful adaptation to an environment that offers few opportunities, or primitiveness may be due to a lack of contacts with other cultures. It does not necessarily prove the inherent inferiority of its bearers. In Europe many people are engaged in occupations and work with a material equipment as simple as those of many primitive peoples. Nor does there appear to be any essential difference between European and primitive mentality. Most primitive beliefs and ways of thought can be watched in Europe, often among cultivated people.—*R. U. Sayce*.

3418. Seashore H. The pattern score in scientific study of music. *Proc. Ia Acad. Sci.*, 1933, 40, 189.—The pattern score co rdinately records the melody

curve, intensity curve, sample timbre analysis, durational aspects, facts from the musical score, and phonetic elements.—*B. Wellman* (Iowa).

3419. Thurnwald, R. Dynamik der volks- und v  lkerpsychologischen Vorg  nge. (Dynamics of folk- and ethnopsychological processes.) *Forsch. Fortsch. dtsh. Wiss.*, 1934, 10, 368 ff.—Peoples undergo change and take form in the course of history under the most diverse influences, "ethnic stratification processes," protracted assimilation processes, etc.; yet the stability of the racial "nucleus" is not to be underestimated. It is the task of present-day racial psychology to comprehend the reactions of the "nucleus" to the various changes of the day and to examine the reciprocal actions among different peoples according to their "nuclei."—*P. Krieger* (Leipzig).

3420. Tiebout, C. E. The measurement of psychophysical functions characteristic of extreme degrees of artistic capacity. *Proc. Ia Acad. Sci.*, 1933, 40, 197.—The psychophysical traits characteristic of artistic as opposed to non-artistic children are compared.—*B. Wellman* (Iowa).

3421. Walker, R. Y. Eye-movements of good readers. *Proc. Ia Acad. Sci.*, 1933, 40, 199-200.—Vertical and horizontal eye-movements of 50 good readers were photographed. Norms on seven measures of movement were established. There were significant differences in movement on reading materials of varying difficulties.—*B. Wellman* (Iowa).

3422. Wantoch, H. Die bisher in der Schweiz gesammelten Erfahrungen   ber die Kastration von Sexualverbrechern. (The combined experience in Switzerland to the present time concerning castration of sexual delinquents.) *Arch. Krim.*, 1935, 96, 78-80.—The occasional continuance of potency and libido after castration leads to the opinion that the sexual instinct and perversions have both an endocrine and a psychic component. If the first predominates, castration gives the desired result; if the second, it is unsuccessful. Homosexuals in whom the psychic component predominates may be cured by psychotherapy alone. The mental effects of castration on hypersexual men must be reckoned with—inferiority feelings, hate, revengefulness, and loss of productiveness. Other patients who commit sexual offenses against their will are grateful for a solution which allows them to participate in normal life. In sex delinquents certain psychopathic traits, e.g. drug addiction, often disappear after castration, although others—*Wanderlust*, etc.—may appear. Psychoses following castration are rare, and occur only in women. In sexually abnormal or overexcitable men the instinct will very probably disappear after castration. Among psychotic and feeble-minded men potency seems to disappear after castration less often than among the mentally normal. In psychotic and defective women castration appears to have no effect on sexuality.—*M. E. Morse* (Baltimore).

3423. Weimann, W. Leichensch  ndung aus Aberglauben. (The desecration of corpses due to superstition.) *Arch. Krim.*, 1935, 96, 54-57.—A report

from Upper Schleswig of the mutilation of the body of a 65-year-old widow, eleven days after burial. Both legs had been separated from the thighs and deep cuts extended from the abdomen to the breasts. The peculiar nature and distribution of the injuries denote the vampire superstition, which is widespread in Eastern Europe and gives rise to various mutilations of the dead. The cuts were to prevent the dead woman from living on as a vampire by incapacitating her for walking, childbearing and suckling. Weimann has also collected from Eastern Germany a surprising number of desecrations of bodies due to other superstitions.—*M. E. Morse* (Baltimore).

3424. Weiser-Aall, L. *Der seelische Aufbau religiöser Symbole*. (The mental construction of religious symbols.) *Z. Volksk.*, 1934, 15-46.—Whereas in the actual construction of symbols the more or less conscious mental preparation appears stronger, the released set is marked in the apprehension of symbols. In the first case the stress lies upon the denial of the conceptual identity of the two halves of the symbol, though the emphasis of the fictional consciousness brings a rationalistic factor with it in the definition; while in the second case the formed idea is the starting point, and the inseparable unity of the two halves of the symbol is therefore emphasized. Both phenomena are complicated events, constituting at once the highest accomplishment of the mind and an experience of belief.—*P. Krieger* (Leipzig).

3425. Winkler, R. *Die sogenannte "religionspsychologische Methode" und der Idealismus. Eine Erwiderung*. (The so-called "method of religious psychology" and idealism. A reply.) *Arch. ges. Psychol.*, 1934, 90, 289-296.—*E. L. Kelly* (Connecticut State).

3426. Young, P. V. *Interviewing in social work; a sociological analysis*. New York: McGraw-Hill, 1935. Pp. 432. \$3.00.—*R. R. Willoughby* (Clark).

[See also abstracts 3114, 3115, 3177, 3212, 3236, 3316, 3322, 3340, 3360, 3361, 3436, 3442, 3465, 3471, 3480, 3491, 3495, 3496, 3498, 3504.]

INDUSTRIAL AND PERSONNEL PROBLEMS

3427. Awaji, Y. *A trial of prognosis to differentiate the aptitude for aviators*. *Jap. J. Psychol.*, 1934, 9, 979-1000.—In order to find prognostic standards to differentiate the aptitude for aviators two lines of research were adopted: (1) two series of aptitude tests by experimental procedure, and (2) character estimation obtained from instructors by the rating-scale method. The tentative prognosis obtained from these results was compared with (1) the desire for the job of candidates themselves, (2) the judgment of instructors concerning the aptitude of each candidate, and (3) school marks. Among these data the author found a very high agreement.—*R. Kuroda* (Keijo).

3428. Cleeton, G. U. *Occupational adjustment in Allegheny County*. Pittsburgh: Pittsburgh Personnel Association, 1935. Pp. 58.—"With any marked movement toward reemployment, occupational adjustment, going far beyond job finding and placement

will become necessary for about 60 per cent of the persons now unemployed." The investigation reported suggests a systematic approach to the problems presented by this situation. An analysis was made of individual abilities and traits of 1901 students in 8 schools for adults. It was found that the greatest service in educational and vocational guidance could be rendered in the following ways: (1) By assisting organizations which offer courses for adults in the classification and placement of students in courses suited to individual interests and abilities. (2) By assisting these adults in the selection of suitable vocations. (3) By advising these persons on training programs to fit them for suitable occupations. (4) By advising the institution and the individual on problems of emotional adjustment. Objective evidence upon which to base advice was obtained through use of the following form: (1) personal history form; (2) mental tests; (3) vocational interest check lists; (4) personality trait questionnaires. Each of the eight organizations was furnished with reports on individual cases. In most cases individual reports were prepared which contained specific recommendations to be conveyed to the individual concerned. The data reported here include: characteristics of the experimental group; tests and measuring devices used; and tables showing the range of vocational interests of men and women. "Experience with the present project clearly reveals a need in Allegheny County for a publicly supported occupational adjustment bureau to which adults might apply for advice and assistance in the solution of personal problems relating to vocational selection and training."—*B. Casper* (New York City).

3429. Dvorak, B. J. *Differential occupational ability patterns*. *Bull. Empl. Stabiliz. Inst., Univ. Minn.*, 1935, 3, 7-46.—Evidence was sought to support the theory of unique traits. Personality adjustments reflect, in varying proportions, the operation of relatively independent traits. The support of the theory is significant for differential diagnosis of vocational aptitude, for it reveals the possibilities of differential training, educational work and placement. The standard battery of tests (see IX: 358) was administered to 18 groups in as many occupations. The profiles of the subjects were classified into their respective group patterns. The relation between particular occupational ability patterns, the degrees of success within the occupation, and the factors at the basis of differential occupational ability patterns were subjected to analysis. Evidence for the theory of unique traits is found in the fact that a given pattern for a group of successful workers does not include uniformly high or low scores. Individuals from a given occupational group can be differentiated from the general population and from different occupational groups on the basis of certain tests. Comparison between the ability profile of a subject seeking guidance and the ability profile of a given occupation, expressed in the same terms, will give indication of probable success in the field. A single, comprehensive, objective forecasting formula should be the aim of vocational guidance.—*J. Steinberg* (Columbia).

3430. Hawkins, L. S., & Schneider, G. **Selection and training of counselors at the adjustment service.** New York: Amer. Assoc. Adult Educ., 1935. Pp. 57. \$50.—This manual describes the procedure followed by the Adjustment Service, a work-relief project sponsored by the American Association for Adult Education, in the selection and training of a staff of 45 counselors during the year 1933. On the basis of the personal, educational, and occupational history and the various test scores of the applicants, and of interviews with the applicants, the Adjustment Service found that a high degree of intelligence or mental alertness; interests characteristic of persons engaged in social service types of work; mature age with successful industrial, business, or professional experience; good general education, good personality; and better than average clerical ability, were desirable characteristics of a person to be trained as a counselor. The essential features of training were intensive reading and studying for the first week and lectures, conferences, interviews with clients, and discussions for the following three weeks.—R. H. Brown (Clark).
3431. Kaufman, V. I., & Ananov, B. G. [Polytechnical schools arouse vocational tendencies.] In *Obshchi i Tekhnicheski Krugozor Uchashchevosa Sredni Shkoli*. Leningrad: GIZ, 1934. Pp. 159-194.—The polytechnical course of studies includes vocational guidance. The purpose of this study was to investigate the vocational orientation of elementary school graduates. Due to social influence most of the pupils desired to become engineers, technicians, or skilled workmen in heavy industry. Very few were interested in medicine and pedagogy. 51% of the children who received vocational enlightenment changed their attitude toward vocational selection. The authors emphasize the need for vocational guidance as an integral part of education in the school system.—L. S. Maeth (New York City).
3432. Kiriwara, S. **Studies on needle work.** *Jap. J. Psychol.*, 1934, 9, 1001-1012.—As to the results of several different kinds of this work, the general rating of the teachers is generally constant, but there is no high correlation between it and work results of parts obtained by measuring deviation of seam line, evenness of seam, and exactness of cutting cloth. It may be assumed, therefore, that there should be many other important factors having a close relation to the general rating of performance. Since the speed of these performances goes parallel with the general rating to a certain extent, it is certain that the slower the speed of manual work, the better the results obtained. Agreement in the general rating can be seen in many cases of different kinds of subjects and materials in needle work, but in measurements of various kinds of operation there are found few agreements even in the same operation made as part of different work for different aims and uses. Simple sewing has no great significance in connection with general performance of work. The speed of needle work increases and general performance also advances with age and training, individual differences becoming smaller. There are higher correlations between marks of performance and achievement of mental work in school subjects than between the former and that of manual work in school subjects. A very high correlation also exists between cutting and sewing in regard to exactness and fineness. Agreement is seen again in their speed to a certain extent.—R. Kuroda (Keijo).
3433. Laird, D. A. **What makes people buy.** New York, London: McGraw-Hill, 1935. Pp. 237. \$2.50.—The underlying (as distinguished from the superficial) motives which lead the typical customer to buy are discussed from the standpoint of psychoanalysis. The three parts of the book are entitled: What is the customer like? What does the customer have on the top layers of his mind? What is the successful salesman like?—B. Casper (New York City).
3434. Lauer, A. R. **A portable research clinic and its value.** *Amer. J. Optom.*, 1935, 12, 85-90.—A description of a "driving clinic" for the determination of the visual and performance limitations of automotive drivers. A Fargo truck is used to carry the equipment and the laboratory is carried in the trailer. The laboratory contains equipment for measuring acuity, astigmatism, phorias, ocular dominance, sensitivity to glare, color vision, field of vision, distance judgment, accommodation time, motor coordination, speed of movement, reaction time, strength, mechanical intelligence, blood pressure and auditory acuity, and a composite performance test for measuring reactions similar to actual driving.—R. J. Beitel, Jr. (Clark).
3435. Masuda, K. **Monotonous feeling and conditions of factory work.** *Jap. J. appl. Psychol.*, 1934, 3, 1-32.—Monotonous feeling and hence languor are most vividly experienced in sitting work, in work moderate with respect to hardness, in work continuous for many hours, in working with many others, in work accompanied by noise, and in workmen earning wages according to their quantity of production.—R. Kuroda (Keijo).
3436. Miller, H. E. **The construction and evaluation of a scale of attitudes toward occupations.** *Bull. Purdue Univ.*, 1934, 25, 68-76.—Two forms of such a scale are described. Certain limitations of the scaling method employed are indicated.—O. C. Trimble (Purdue).
3437. Rempel, H. D., Diehl, H. S., & Paterson, D. G. **Physical findings among certain groups of workers.** *Bull. Empl. Stabiliz. Inst. Univ. Minn.*, 1934, 3, 281-299.—Homogeneous occupational groups, skilled workers, factory operatives, and male and female clerical workers, representing the lower socioeconomic status groups, were compared as to the incidence of physical defects. The first three groups differ little in age, height, and weight; differences in physical defects are statistically significant in few instances. Irrespective of occupation, defects exist which may impair industrial efficiency. Intelligence is not a factor causing or obscuring group differences. Physical condition and efficiency correlate .13 by mean square contingency. Group differences are insignificant, and the evidence of the study fails to

support the theory that greater differences would be obtained if a study were made of specific occupations within lower economic levels.—*J. Steinberg* (Columbia).

3438. Ulich-Beil, E. A national system in the Reich. *Occupations*, 1935, 13, 582-591.—A concise presentation of the nature and legal basis of the present German system of public vocational guidance, of the role of the school in vocational guidance, of the use of occupational statistics in Germany, of the types of questionnaires utilized, and of the philosophy of vocational guidance. Enactment of the law establishing the public vocational guidance system by the Reichstag in 1927 involved violent controversy with regard to amalgamation of vocational guidance and employment activities and with regard to unified organization under the control of the Reich. Münsterberg's conception of the purpose of vocational guidance as the adaptation of personality and society to each other, and its inevitable conclusion that the functions of the school and of vocational guidance are closely related, have not been fully realized. At present the school is responsible for education leading to a determination of aptitudes and an ability to choose a vocation, while the separate vocational offices are concerned with the actual choice of a specific vocation. Free compositions by teachers and counselors are favored over carefully formulated questionnaires on the basis of experiments at the Psychological Institute of the University of Jena, in 1926.—*R. H. Brown* (Clark).

3439. Weatherhead, E. L., & Thomson, D. B. A study of the energy expenditure of scrubbing. *Arbeitsphysiologie*, 1933, 6, 595-606.—(*Biol. Abstr.* IX: 749).

[See also abstract 3086.]

EDUCATIONAL PSYCHOLOGY

3440. Achilles, P. S. Vocational motives in college: career decisions among undergraduates. *Occupations*, 1935, 13, 624-628.—Presentation of salient points in a questionnaire study by the Psychological Corporation of the vocational plans of 4527 undergraduates, approximately 100 from each of 50 colleges and universities scattered throughout the country. Only 12% reported themselves totally undecided as to their vocation or career. The returns showed that clarity of vocational aim is a factor in scholastic standing, or that the better students are the ones most likely to do serious thinking about their future careers. About one-half of the 25% receiving vocational guidance reported it satisfactory. The use of psychological tests was reported helpful in high school by 35%, in college by 45%, of the group receiving help. 49% of the entire group reported that their college career or "major" had a specific bearing on their chosen vocation.—*R. H. Brown* (Clark).

3441. Barr, A. S., Theisen, W. W., Wilson, G. M., Keeler, L. W., Monroe, W. S., Krey, A. C., Trabue, M. R., Stalnaker, J. M., Richardson, M. W., Douglass, H. R., Lindquist, E. F., & Woody, C. A symposium on the effects of measurement on instruction.

J. educ. Res., 1935, 28, 481-527.—Expression of a variety of opinions regarding the effects of measurement on instruction, depending on the kinds of measures used, on what is measured and how the results are employed. The general opinion seems to be that such measurement has value but an effort should be made to develop better instruments of measurement and to make more intelligent use of them. Several authors suggest the need of measures of some of the subtler qualities, such as initiative, attitudes, and emotional effects.—*S. W. Fernberger* (Pennsylvania).

3442. Bartholomew, W. T. Imagery in voice pedagogy. *Peabody Bull.*, 1934, 31, No. 1, 20-28.—There is scarcely one point in voice pedagogy on which all authors agree. This diversity of opinion is due both to the nature of the voice mechanism itself and to the fact that it is never entirely under conscious control. Study of about 1000 oscillographic records of sixty male and female singing voices, both good and bad, show that (1) good voices invariably contain a good vibrato, (2) they can produce tones of greater intensity than poor voices, (3) good male voices tend to strengthen a lower partial around 500 cycles, and a high one at about 2800 cycles. These characteristics seem to be associated with an open position of the throat with the larynx lowered, the sides enlarged, and the tongue and jaw relaxed. This setting is opposed by the constantly used swallowing reaction and thereby made difficult of attainment. Constriction at one place or another produces "breathiness" or "husk" in the voice. The desired setting can best be obtained by singing or thinking of nasals such as *m*, *n*, or *ng*, or by trying to feel the tone "in the head," which relaxes the levator palati muscles and thereby destroys the fulcrum from which the powerful swallowing muscles operate. Head resonance actually contributes little to voice quality, but the concept is serviceable. Many types of imagery are useful in obtaining the desired throat position, but such imagery is all too frequently considered an actual explanation of what goes on and not a means to an end.—*L. A. Petran* (Peabody Conservatory).

3443. Bateman, R. M. The relationship between attitudes toward school subjects and certain other variables. *Bull. Purdue Univ.*, 1934, 25, 88-97.—The measured attitudes of samplings of high school pupils in three different cities are presented. The data include attitudes toward English, history, algebra, and Latin. In all approximately 325 pupils were involved in the sampling. Comparative analyses for sex, age, grade, school subject, and occupation differences are indicated.—*O. C. Trimble* (Purdue).

3444. Bentley, J. H., & Kelley, H. Costs of the adjustment service. *Amer. Ass. adult Educ. Adjustm. Serv. Rep.*, 1935, No. 8. Pp. 49.—*R. R. Willoughby* (Clark).

3445. Bowman, L. E. Community programs for summer play schools. New York: Child Study Ass. Amer., 1935. Pp. 48. \$35.—*R. R. Willoughby* (Clark).

3446. Butler, E. I. The effect of a series of learning experiences for teaching certain aspects of child development and family relationships to high school students. *Proc. Ia Acad. Sci.*, 1933, 40, 203.—Exercises designed to bring about desirable changes in the behavior and attitudes of high school seniors toward child development were constructed. A testing program was administered to experimental and control groups at the beginning and close of the experiment.—B. Wellman (Iowa).

3447. Catty, N. The theory and practice of education. London: Methuen, 1934. Pp. xii + 257. 6/-.—Discusses innate characteristics of children, natural incentives to learning, the general development of cognitive, active and affective reactions, the social aspects of education, what education should set out to achieve, and various practical questions connected with school organization. The book is very much influenced by the writings of McDougall. A list of additional readings is given for each topic discussed.—F. C. Bartlett (Cambridge, England).

3448. Dale, A. B. The use of mental tests with university women students. *Brit. J. educ. Psychol.*, 1935, 5, 59-75.—Tests of Cambridge women students over eight years give IQ's averaging 127.5. No improvement in ability while at college could be measured. The correlation of test score with college entry examination standing varies considerably; the average is below .30. The average test score for students gaining Class I in final Tripos examination is slightly higher than that of Class II students, and this again slightly exceeds the average for Class III students, but the differences are not large and there were many individual cases of wide discrepancy. In about 27% of cases admitted to college there were marked discrepancies between test performance and that in entry examinations. Academic success in college entrance and degree examinations appears to depend as much on specific factors as upon a general mental factor; some academic subjects require more ability than others. The final conclusion is that the selection of students best fitted to pursue highly specialized degree courses does not appear to be made easier or more reliable by the use of mental tests.—K. M. Cowdery (Stanford).

3449. Emmett, W. G. The tetrad criterion and scholastic examinations. *Brit. J. educ. Psychol.*, 1935, 5, 93-100.—The author discusses a previous finding by J. H. Wilson, based on tetrad-difference technique, of the determination of school subject correlations by one single general factor and other factors specific to each subject. The finding was not to be expected in view of several commonly recognized and accepted independent general and group influences. Statistical considerations raise doubt as to Wilson's findings, for a tetrad difference with a small significance ratio is not necessarily to be taken as evidence of non-departure from zero, or if the original correlations are small and unreliable an increase in the size of the sample of population will usually increase the significance ratio. The tetrad criterion is a less sensitive indication of independent general factors

than of group factors. It is unsound to conclude that a tetrad difference is zero when it is less than five or even three times its probable error.—K. M. Cowdery (Stanford).

3450. Evans, J. E. Class participation as a class room activity. *Proc. Ia Acad. Sci.*, 1933, 40, 186-187.—A scheme of teaching featuring student committee reports was found to be successful. The students made higher grades, rated the instructor more favorably, and expressed themselves in favor of the method.—B. Wellman (Iowa).

3451. Finkenbinder, E. O. A measure of the amount of cheating by college students. *Proc. Ia Acad. Sci.*, 1933, 40, 201.—Papers containing true-false answers were returned to classes for scoring after being photographed without their knowledge. About 50% of the students changed their own answers. About 5% changed another's answers or overlooked errors in another's papers.—B. Wellman (Iowa).

3452. Frank, H. A comparative study of children who are backward in reading and beginners in the infant school. *Brit. J. educ. Psychol.*, 1935, 5, 41-58.—Testing of 35 backward readers and 350 beginners reveals a complete accordance in kinds of mistakes between the two groups. The mistakes are based on modes of perception. Those of backward readers have remained at the same level as those of the young children. The deficiencies seem psychologically based on the importance of general shapes with neglect of details. For some the solidity of the structure is in terms of larger units, sentences; for others, words. The nature of the errors in perceiving or understanding depends on these factors.—K. M. Cowdery (Stanford).

3453. Frith, G. D. Mental health program in South Bend city schools. *Indiana Bull. Char. Correct.*, 1935, No. 217, 504-507.—The parent-child relationship is most important in personality development, and probably the teacher-child relationship is next most important. For most satisfactory relationship the teacher must herself be stable and she must recognize the deviations of normal children. The modus operandi of the psychological clinic of the city school system is described.—C. M. Louttit (Indiana).

3454. Gaskill, H. V. Radio broadcasting vs. lecturing in psychology; preliminary investigation. *Proc. Ia Acad. Sci.*, 1933, 40, 187-188.—Test scores were slightly but consistently and significantly higher for students listening by radio to two talks on psychology and athletics than for students listening "directly."—B. Wellman (Iowa).

3455. Masson, L. T. A suggested course of study in music for high school. *Peabody Bull.*, 1934, 31, No. 1, 32-37.—A course of study in music for a large high school with one supervisor is worked out after analysis and discussion of (1) like courses of study from six large cities, and (2) questionnaire data from about 2000 high school pupils as to their musical activities and preferences.—L. Petran (Peabody Conservatory).

3456. Ojemann, R. H. The application of psychological classification of changes effected through learning to problems of curriculum construction. *Proc. Ia Acad. Sci.*, 1933, 40, 201-202.—Changes effected through learning are psychological in character and involve the intellectual, emotional and fundamental integrational components of behavior. This classification has been used in an attack upon problems involved in curriculum construction.—B. Wellman (Iowa).

3457. Ojemann, R. H. Theoretical considerations underlying curricular and learning studies. *Univ. Ia Stud. Child Welf.*, 1934, 10, 9-27.—Objectives in parent education derived from a psychological analysis are more useful than those derived from an analysis of the external aspects of activity. Judgments of a group of highly trained individuals in action may be used in selecting the learning products to be desired. Generalizations vary in validity; there are rapid changes in the validity of any particular generalization. A generalization to be usable by parents must be sufficiently detailed to allow practical application. Knowledge and attitudes are interrelated.—B. Wellman (Iowa).

3458. Silance, E. B., & Remmers, H. H. An experimental generalized master scale: a scale to measure attitude toward any school subject. *Bull. Purdue Univ.*, 1934, 25, 84-87.—Two forms of such a scale are presented. The results of certain applications of the two forms are indicated.—O. C. Trimble (Purdue).

3459. Vermeulen, G. La relació del nivell mental amb els resultats escolars. (The relation of mental level to school records.) *Rev. Psicol. Pedag.*, 1934, 2, 349-364.—Using his methods of the pedagogical level and psychographic examination of intelligence, Vermeulen studied the relationship between mental and school retardation among children in the Brussels mental-hygiene clinic. Comparison between chronological age and pedagogical level revealed a much higher percentage of retardation than between age and school grade, and it was also apparent earlier. There was also a disconcerting lack of correlation between intelligence and school grade. The closest correspondence between intelligence and pedagogical level occurred in children of normal intelligence. Among the retarded, the disparity increases up to a retardation of five years, after which there is a concordance, due to the forcible limitation of educational possibilities. In children of low intelligence who make unexpectedly good records, acquisition predominates over elaboration. Here the global mental level only distorts the true picture, while the psychogram explains the discrepancy. Vermeulen also discusses personality traits of mental defectives in relation to success in school and adult life, and the duty of the state to give each child an education suited to his capacities.—M. E. Morse (Baltimore).

3460. Wilson, J. H. The tetrad criterion and scholastic examinations. *Brit. J. educ. Psychol.*, 1935, 5, 101-105.—As a reply to Emmett's criticism of Wilson's previous report a further analysis using a

different technique (that of the contribution of successive component factors) is reported. Again a single general factor is found to supply the principal predominating component, accounting for the variance of seven scholastic examinations. The remaining factors account for rapidly diminishing amounts of the total variance. The original conclusions are confirmed by these results. Variations from Emmett's conclusions are justified because of the different criteria quoted.—K. M. Cowdery (Stanford).

[See also abstracts 3278, 3356, 3369, 3382, 3406, 3438, 3477, 3493.]

BIOMETRY AND STATISTICS

3461. Copeland, H. A. A note on "The Vectors of Mind." *Psychol. Rev.*, 1935, 42, 216-218.—The elaboration of statistical techniques for factor analysis has outrun the facilities for accurately identifying the factors. The author attempted to determine whether "religiousness" or "radicalism" was a more accurate term for the factor involved in one of Thurstone's analyses. He had judges rank the possession of favorable attitudes toward a number of public issues on two bases—radicalism and religiousness. Averaging these ranks and comparing them with the factor loadings proved that religiousness is the more accurate designation of the common factor.—A. G. Bills (Chicago).

3462. Durup, G. Note additive sur la méthode statistique de mesure. (Additional note on the method of statistical measurement.) *Année psychol.*, 1934, 34, 53-60.—The median measure used in experiments on just noticeable difference of bands of light is the stimulus which gives 50% positive responses, and allows also for negative and doubtful responses. The essential point is to understand the meaning of the median error, due to the central factors. If the subject judges without doubt, and if he can analyze his response when in doubt, the frequency of the non-negative responses at the crucial threshold gives the measure of median error.—J. Steinberg (Columbia).

3463. Vinci, F. *Manuale di statistica*. (2 vols.) Bologna: Zanichelli, 1934. Pp. 230; 302. L. 20.—This is a discussion of statistics divided into three parts. The work is pointed directly at making quantitative studies of social facts. The first part of the book is devoted to means of tabulation and graphic illustrations to demonstrate constant characteristics to aid analytical determination. The second part makes an analytical examination of the various methods to illustrate the circumstances under which the phenomenon exerts its influence. The third part determines relationships which occur between the backgrounds of observations relating to different phenomena, such as the relationship of the death rate to time, space, sex, etc. The last chapter is a guide for research into statistical relationships. The book presumes a knowledge of higher mathematics. There are four appendices.—L. S. Selling (Wayne).

3464. Willoughby, R. R. The concept of reliability. *Psychol. Rev.*, 1935, 42, 153-165.—Reliability can

be defined *operationally* as the degree of correlation between alternate forms of a test or between halves, or between two administrations of it; but a more important definition considers the *objectives* to be attained, i.e. the assurance that "true" results will not be obscured by "chance" factors. This assumes a noumenal trait which is measured. Most chance factors reside in the subject himself rather than the test, i.e. a changed response to the same stimulus. Reliability therefore depends on eliminating items susceptible to response determination by stimuli other than those studied. These are detected statistically (1) by marked temporal variation of response where this is not due to genuine changes in the ability tested; (2) by finding the degree of correlation of the item responses with the ability indirectly through intercorrelating the items. The possibility that high intercorrelation merely indicates duplication of items can be checked by seeing that the items differ *situationally* rather than merely *verbally*.—A. G. Bills (Chicago).

MENTAL TESTS

3465. Exarchopoulos, N. [Differences in the development of intelligence in children of different social levels.] *Prakt. Akad. Athen.*, 1933, 93-105.—Intelligence measurements were taken in Athens on 571 children, aged 5-13, belonging to different schools and different social levels. In the underprivileged groups the children were essentially normal, the distribution curve being Gaussian. In the privileged groups, the children showed an intellectual superiority, with asymmetry of distribution.—(Courtesy *Année psychol.*)

3466. Feder, D. D. A preliminary report of a new departure in mental measurements and some of its practical applications. *Proc. Ia Acad. Sci.*, 1933, 40, 200-201.—The technique goes beyond mere information, getting into the subtler intricacies of human thought and the functional aspects of intelligence. It is believed that important contributions to general theory can result from this type of experimentation.—B. Wellman (Iowa).

3467. Korngold, S., & Levy, A. La conduite psychologique devant l'effort mental imposé. (Psychological behavior with reference to imposed mental effort.) *Année psychol.*, 1934, 34, 61-113.—What are the causes of omissions of responses in mental tests? Three series of group tests of intelligence were administered to children, aged 9-16, and adults—electrician apprentices, workers, and students—3696 in all. Errors, omissions and failure to follow directions were scored. The passive attitude toward difficulty translates itself into errors, and is common in the younger age groups. The tendency is also related to the intellectual development of the subjects. The passive attitude could be considered an index of intellectual inferiority. It may also be interpreted as a defense reaction toward disproportionate effort.—J. Steinberg (Columbia).

3468. Tanaka, K. A tentative scale for measuring general intelligence by non-language tests. *Jap. J.*

Psychol., 1934, 9, 923-951.—In view of comparative study of the Asiatic races, especially those who live in Chosen, Manchukuo and China, a tentative intelligence scale was planned. It consists of the following ten kinds of test: (1) maze, (2) cube analysis, (3) geometrical construction, (4) symbol-digit substitution, (5) form series completion, (6) number checking, (7) addition, (8) number series completion, (9) form cancellation, (10) pictorial completion. Reliability of the scale was surveyed.—R. Kuroda (Keijo).

[See also abstracts 3352, 3448.]

CHILDHOOD AND ADOLESCENCE

3469. Ackerley, L. A. The knowledge and attitudes possessed by parents of elementary school children. *Proc. Ia Acad. Sci.*, 1933, 40, 202.—The needs of a group of parents were determined by a comparison of what specially selected judges considered important in the care and guidance of children with the knowledge and attitudes possessed by the parents. Objective tests and attitude scales were used to measure parents' knowledge and attitudes.—B. Wellman (Iowa).

3470. Ackerley, L. A. The information and attitudes regarding child development possessed by parents of elementary school children. *Univ. Ia Stud. Child Welf.*, 1934, 10, 113-167.—Also Appendix III, directions to judges and test items for information and attitudes regarding child development possessed by parents of elementary school children, 357-380. A comprehensive list of generalizations was compiled which were considered by a group of experts to be highly important for the satisfactory care and guidance of elementary school children. Objective attitude and knowledge tests were constructed and given to 771 parents. All attitude scales used revealed parental opinions that were outside the range which the experts considered an intelligent attitude. Very few significant differences were found between mothers and fathers.—B. Wellman (Iowa).

3471. Aya, T., & Furuiti, K. The Japanese and Manchurian children's view of other nations. *Jap. J. appl. Psychol.*, 1934, 3, 93-116.—R. Kuroda (Keijo).

3472. Bally, G. Biologische Voraussetzungen der frühkindlichen Persönlichkeitsentwicklung. (Biological premises as to personality development in young children.) *Schweiz. Arch. Neurol. Psychiat.*, 1933, 32, 1-6.—Bally discusses the value of parental care in giving the child an opportunity to learn about the world through play. He also warns against excessive solicitude in the direction either of strictness or indulgence, and its importance in the origin of neuroses.—M. E. Morse (Baltimore).

3473. Burling, T. Do we have faith in childhood? *Indiana Bull. Char. Correct.*, 1935, No. 217, 507-512.—"The object of the old parenthood was to develop an unwavering loyalty to parental ideals." The new parenthood aims to preserve flexibility as much as possible and to "postpone just as long as possible, and ideally until the end of life, the achievement of a

finished product." "The goal of the newer education is not to get the child educated, but to preserve his educability."—*C. M. Louttit* (Indiana).

3474. **Butler, E. I.** A study of the needs of high school students and the effectiveness of a program of learning in selected phases of child development and family relationships. *Univ. Ia Stud. Child Welf.*, 1934, 10, 169-248.—Also Appendix IV, forms and data regarding a study of the needs of and program of learning for high school students, 381-391. The needs of high school pupils in child development and family relationships were determined through objective tests given to 1586 high school students in fourteen communities. There were found to be many important generalizations relative to child development and family relationships which are not operating in the thinking of high school pupils. Many inconsistencies were revealed in attitudes toward the family as an agency for personality development, toward the extent to which fathers should participate in the care and upbringing of children, and toward the importance of play in the development of the child. There were significant sex differences, mostly in favor of the girls. A program of learning experiences was constructed and applied to several groups of girls. Control groups were equated on initial scores on the achievement tests or intelligence. The experimental groups made significant gains.—*B. Wellman* (Iowa).

3475. **Cheranovski, R. I., Lange, M. V., Bogomaz, L. U., Kanicheva, R. A., & Sergeev, L. I.** [The technical construction ability of school children.] In *Obshchi i Tekhnicheski Krugozor Uchashchevosa Sredni Shkoli*. Leningrad: GIZ, 1934. Pp. 46-91.—The investigation makes an attempt at revealing the mechanical achievement of school children in relation to age, sex, mental development, and psychological types. The results show: The ability to make working drawings improves with age. There is a great deal of lack of understanding and interest in the material used. Children at all ages find it difficult to understand working-drawing construction and the physical interrelations connected with it. Sex differences completely disappear as the children reach the upper grades. There was a high positive correlation between mechanical ability and school success. The authors emphasize that "thinking" includes both motor and verbal activity.—*L. S. Maeth* (New York City).

3476. **Christoffel, H.** *Das Alleinkind*. (The "only child.") *Z. Kinderpsychiat.*, 1935, 1, 176-183.—The problem of the only child is mainly one of the pre-school years. Early social contacts are a necessary complement to home training. From the standpoint of the health of the only child as well as that of society, the more frequent use of the kindergarten by these children is to be looked upon with favor.—*D. Shakow* (Worcester State Hospital).

3477. **Comas, M.** *Alguns fonaments psicologics per la metodologia des matamatiques*. (Some basic psychological principles for the methodology of mathematics.) *Rev. Psicol. Pedag.*, 1934, 2, 419-429.

—Comas reports her observations on the development of numerical concepts and the characteristics of the child's reasoning, and draws conclusions therefrom as to the teaching of arithmetic. The general idea of numbers and of more or less precedes the development of language, and a confused synthesis precedes analysis. The idea of ordinal precedes that of cardinal numbers. Comprehension through sight and motor sense appears much earlier than through hearing. The child's reasoning passes through three phases. Up to 7 years it is based on single or special cases, disregards contradictions, and is irreversible. From 7 to 12 years it tends to become reversible on the plane of sensory experience, without introspection or retrospection. At 11-12 years the child becomes capable of reasoning from a hypothesis, and formal deduction and reversibility appear. Until he is socialized and hence can enter another's viewpoint (i.e. assume a hypothesis), formal mathematical teaching is useless, but before this comes a basic intuitional preparation, profiting by the discovery, at 7 or 8 years, of the necessity for proof. The pupil gradually becomes conscious of the reasoning processes and able to express them verbally. Too advanced methods are often responsible for antipathy to mathematics.—*M. E. Morse* (Baltimore).

3478. **De Campos, M.** *O filho unico e a hygiene mental*. (The only child and mental hygiene.) *Arch. brasil. Hyg. ment.*, 1934, 7, 3-17.—The author derives the evils to which the only child is subject from the extreme watchfulness and care of the parents and from the fact that the child has no young companions and learns to imitate adults. The consequence is a lack of the normal joys of childhood and the necessity of living a life of day dreaming and vain imagining. The evils are accentuated if the parents are neurotic. There results an abnormal emotional development and an accentuation of selfishness. By way of treatment it is suggested that the parents of an only child move to another neighborhood if playmates for their child are not to be found in the vicinity, or if this is not possible that another child be adopted, and that the only child be educated outside the home. The article is documented by four case histories and some reference to the literature.—*T. V. Moore* (Catholic University).

3479. **De Kok, W.** *Guiding your child through the formative years*. New York: Emerson Books, 1935. Pp. 191. \$2.00.—The author is a physician with a training in psychoanalysis who has lived in Italy, Germany, England and South Africa. Her experiences with her two children, a girl and a boy, from birth to the age of five are recorded. She discusses the shock of birth to a baby; swaddling clothes; the satisfaction of suckling; the gradual process of weaning; the newer methods of controlling excretion; training in mothercraft; the fears and fancies of childhood; the reason for and treatment of tantrums and infantile habits; the creation of a false concept of sex by differentiating sex education from other education; freedom for children; the originality of her daughter as regards rhymes and songs; the

preparation of the child three or four years old for the arrival of the new baby; and preparation for life through early training in independence. "It is only by developing in his own way that a child reaches his full stature."—G. B. Thompson (Worcester, Mass.)

3480. Dow, M. L. **An observational study in a playground situation of differences in artistic personality at the child level.** *Proc. 1a Acad. Sci.*, 1933, 40, 197.—Artistic children differ primarily from non-artistic in that they devote more time to play materials and are consequently less active physically and less social. Six artistic and five non-artistic children aged five to eight years were observed.—B. Wellman (Iowa).

3481. Gesell, A. **The study of infant behavior.** (Film.) New York: Erpi Picture Consultants, 1930. 2 reels, 2,000 ft., 35 mm. and 16 mm. \$100 and \$50 sale per reel.—Talking film with narration by Gesell, produced by The Yale Clinic of Child Development. (One of a series of films, here listed, portraying *The Life and Growth of the Human Infant*.) An inclusive, introductory view of the clinical and research activities of the Yale Clinic of Child Development. Depicts the general course of a normative examination: the arrival of the mother and the infant, the behavior test situations, the physical measurements and the operation of recording and observation in the photographic dome. The test materials, the examination crib and infant's chair, and the properties of the one-way vision screen are demonstrated. Specimens of behavior in reaction to the cubes, pellet, spoon, cup and spoon, and formboard are shown at 16 and at 44 weeks. Ring and string behavior characteristics at 28 weeks, at 36 weeks, and at 44 weeks are compared by the method of coincident projection, in which two distinct ages are simultaneously screened. The techniques of cinematography and the cinema analysis of behavior patterns are outlined. A second reel portrays the procedures of the service division of the clinic and of the guidance nursery. A series of diagram "dissolves" suggests the rapidity and complexity of mental growth in the first year of life.—A. Gesell (Yale).

3482. Gesell, A. **The growth of infant behavior: early stages.** (Film.) New York: Erpi Picture Consultants, 1934. 1 reel, 1000 ft., 35 mm. and 16 mm. \$100 and \$50 sale.—Talking film with narration by Gesell, produced by The Yale Clinic of Child Development. This film deals with the concept of behavior pattern. By comparative devices the early stages of growth patterning are portrayed. The behavior of Boy D at 8 weeks and his behavior at 52 weeks are brought into contrast. The postural responses of Boy E at 12, 16 and 20 weeks are shown in close succession in the pulled-to-sitting and supported sitting situations. His cube behavior at these same ages is comparatively analyzed by means of slow-motion coincident projection. Animated diagrams are used to illustrate the meaning of the term *behavior pattern*. The reel concludes with a glimpse of cube behavior at one year. "These progressive changes in the patterning of cube behavior give us a

true indication of how the mind of the infant matures."—A. Gesell (Yale).

3483. Gesell, A. **The growth of infant behavior: later stages.** (Film.) New York: Erpi Picture Consultants, 1934. 1 reel, 1000 ft., 35 mm. and 16 mm. \$100 and \$50 sale.—Talking film with narration by Gesell, produced by The Yale Clinic of Child Development. An introductory animated diagram depicts the growth of the fetal hand. The neonatal hand also is pictured. The film then continues a portrayal of further stages in the patterning of cube behavior at 24, 28, 40 and 52 weeks. The method of coincident projection is used to define the developmental differentiations in visual regard, grasp, manipulation and exploitation. The behavior at 24 and at 28 weeks is dissected into stilled pattern phases. The behavior at 40 weeks is portrayed in detail to delineate the preeminence of the index finger in the patterns of manual behavior. A concluding summary suggests further stages of growth up to 5 years of age.—A. Gesell (Yale).

3484. Gesell, A. **Posture and locomotion.** (Film.) New York: Erpi Picture Consultants, 1934. 1 reel, 1000 ft., 35 mm. and 16 mm. \$100 and \$50 sale.—Talking film with narration by Gesell, produced by The Yale Clinic of Child Development. Delineates typical postural behavior in one infant, Boy D, at 13 successive age levels, namely 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, and 80 weeks. Advance in prone posture is shown at 8, 12, 16 and 20 weeks; stepping movements in the supported standing position, rolling, the preliminary creep attitude, pivoting, and rudimentary creeping at later ages. Cruising and well-defined quadrupedal locomotion are shown at 40 weeks. Combinations of prehensory, exploitive, and postural behavior appear at 44 weeks; standing, equilibrium, and early walking at 48 and 52 weeks; and running at 80 weeks. A series of rapid "dissolves" summarizes the ontogenetic sequence, and gives a concentrated unifying view of the trends of behavior patterning through 13 consecutive stages.—A. Gesell (Yale).

3485. Gesell, A. **From creeping to walking.** (Film.) New York: Erpi Picture Consultants, 1934. 1 reel, 1000 ft., 35 mm. and 16 mm. \$100 and \$50 sale.—Talking film with narration by Gesell, produced by The Yale Clinic of Child Development. This film is supplementary to that on *Posture and Locomotion*. It delineates in naturalistic situations the later stages of prone and upright progression in an infant girl (Girl B) at 7 age levels; namely 36, 40, 44, 48, 52, 68 and 80 weeks. Flash-backs are used to make comparisons with the developmental stages of locomotion in Boy D. Temperamental as well as motor differences are made apparent. 48-weeks behavior is depicted in detail to show associated patterns of kneeling, standing, lowering, cruising, rolling, creeping, pivoting, assisted walking. "Growth is a process of progressive organization in which patterns of behavior are constantly correlated and combined as you see them here." Advanced walking and stair-

climbing are shown at 68 and 80 weeks.—*A. Gesell (Yale).*

3486. Gesell, A. A baby's day at 12 weeks. (Film.) New York: Erpi Picture Consultants, 1934. 1 reel, 1000 ft., 35 mm. and 16 mm. \$100 and \$50 sale.—Talking film with narration by Gesell, produced by The Yale Clinic of Child Development. This film is designed to give a compressed summary of a day's cycle of behavior at the age of twelve weeks. With the aid of an animated clock dial the routine of the infant's domestic day is pictured. The following situations are shown in sequence: sleeping, yawning, stretching, waking, breast feeding, nap, undressing, bath, sunning, dressing, bottle feeding, sleep, feeding, play, outdoor nap, floor play, feeding, sleep, and night nursing. The psychological and hygienic implications of the child care situations are indicated in the spoken commentary. The record of the behavior day of this infant (Boy A) at 12 weeks furnishes a basis for comparisons at later age levels.—*A. Gesell (Yale).*

3487. Gesell, A. A thirty-six weeks behavior day. (Film.) New York: Erpi Picture Consultants, 1934. 1 reel, 1000 ft., 35 mm. and 16 mm. \$100 and \$50 sale.—Talking film with narration by Gesell, produced by The Yale Clinic of Child Development. The infant (Boy A) whose behavior day at 12 weeks was charted in the previous reel, is now 36 weeks old. He has made striking progress in the interval. Changes in his behavior are apparent in his bath behavior, feeding and play. A long continuous sequence of play with a water toy reveals marked perseverance of attention. The portrayal of the infant's spontaneous play activities includes a unique record of his very first successful creeping. At one meal his mother feeds him; at another his father. Differences in the infant's responses to these feedings are made evident. The social aspects of his behavior receive incidental comment in the narration.—*A. Gesell (Yale).*

3488. Gesell, A. A behavior day at 48 weeks. (Film.) New York: Erpi Picture Consultants, 1934. 1 reel, 1000 ft., 35 mm. and 16 mm. \$100 and \$50 sale.—Talking film with narration by Gesell, produced by The Yale Clinic of Child Development. The effects of increasing maturity on the cycle of daily behavior are delineated in an infant girl (Girl B). The behavior in the bath reveals maturer patterns of play. A prolonged episode of repetitive and exploitive play with a water toy demonstrates characteristics of learning and of experimentation. The feeding situations show developing capacities of self help. The narration places emphasis on the psychological import and the educational significance of the infant's everyday experience. These films, which chart specimen behavior days at advancing age levels, serve to reveal persisting traits of individuality as well as developmental progressions. The films also indicate the psychological aspects of child care.—*A. Gesell (Yale).*

3489. Gesell, A. Behavior at one year. (Film.) New York: Erpi Picture Consultants, 1934. 1 reel, 1000 ft., 35 mm. and 16 mm. \$100 and \$50 sale.—Talking film with narration by Gesell, produced by

The Yale Clinic of Child Development. The characteristic behavior patterns of a normative one-year-old infant (Girl B) are demonstrated by means of standardized developmental tests. Continuous run records show the full sequence of reactions in the following situations: consecutive cubes, massed cubes, cup and spoon, cup and cubes, pellet, pellet and bottle, bell, ring and string, ring-string and bell, paper and crayon, performance box, formboard. Fundamental modalities of response and distinctive dynamic characteristics appear repeatedly and consistently in the flow of behavior. The significance of maturity level and of individuality is cumulatively conveyed.—*A. Gesell (Yale).*

3490. Gesell, A. Learning and growth. (Film.) New York: Erpi Picture Consultants, 1934. 1 reel, 1000 ft., 35 mm. and 16 mm. \$100 and \$50 sale.—Talking film with narration by Gesell, produced by The Yale Clinic of Child Development. The relationships between maturity and learning are delineated in a comparative manner at varied age levels. Naturalistic and normative test situations are used to set forth the possibilities and more particularly the limitations of training. Responses to nursery game "teaching" are shown at 28 weeks (Boy B), 32 weeks (Girl A), 36 weeks and 40 weeks (Girl B), and 48 weeks (Boy A and Girl B). The influences of goal, lure, imitation and demonstration are shown in postural and problem-solving situations (Boy B, 40 weeks). The solution of a ring and string problem on the floor is depicted in detail in this same infant at advancing stages of postural maturity at 36, 40 and 48 weeks. The comment deals especially with the factors of maturation.—*A. Gesell (Yale).*

3491. Gesell, A. Early social behavior. (Film.) New York: Erpi Picture Consultants, 1934. 1 reel, 1000 ft., 35 mm. and 16 mm. \$100 and \$50 sale.—Talking film with narration by Gesell, produced by The Yale Clinic of Child Development. Ten different children from 8 weeks to 7 years of age are depicted in a variety of social situations. These situations include response to social approach in infants at 8, 12 and 16 weeks. Emotional characteristics of Boy D are pictured at length at advancing age levels from 20 weeks to one year. A long sequence shows interesting "social" reactions to his mirror image. Six infants are shown in comparative series to emphasize individual differences. Household situations are portrayed to exhibit social interactions between infant and adult and toward older brothers and sisters. The developmental as well as the conditioning aspects of early social behavior are suggested in the comment.—*A. Gesell (Yale).*

3492. Gesell, A. The ontogenetic patterning of infant behavior. *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 66-80.—Behavior at all stages of development is patterned. The basic configurations, correlations and successions of behavior pattern are determined by a process of maturation. This process has been demonstrated by developmental studies of premature and of full-term infants and by experimental studies of monozygotic twins.—*D. G. Marquis (Yale).*

3493. Hedrick, B. E. The effectiveness of a program of learning designed to change parental attitudes toward self-reliance. *Univ. Ia Stud. Child Welf.*, 1934, 10, 249-268.—A teaching program designed to change the attitude of parents toward the development of self-reliance in children was carried out in six meetings each with four groups of parents totaling 48 in number. Attitudes were measured before and after teaching by means of the Ojemann self-reliance attitude scale. Significant changes in attitude occurred. The changes were not confined to the specific phases taught but spread to untaught phases as well. Age of parent did not affect the results.—B. Wellman (Iowa).

3494. Hetzer, H., & Braun, A. The development test as applied to infants in the service of psychodiagnosis. *Character & Pers.*, 1935, 3, 230-237.—The Vienna development tests, designed by Bühler and Hetzer and discussed in this article, measure the degree of development reached by the infant along six lines of behavior: (1) sensory perception, (2) body movement (body control), (3) sociality (language), (4) learning capacity (memory and imitation), (5) capacity to deal with a given material, and (6) intellectual productivity. The tests consist of seventeen series with ten tasks in each. The authors have applied the tests to the development of three infants whose complete developmental histories are known. The results are of inestimable value in reaching psychodiagnostic judgments and provide a basis for correcting erroneous judgments based purely on physical measures and casual observations. One figure is presented.—M. O. Wilson (Oklahoma).

3495. Heuyer, G. Les enfants coupables. (Delinquent children.) *Z. Kinderpsychiat.*, 1935, 1, 184-187.—D. Shakow (Worcester State Hospital).

3496. Koga, Y. Measurement of attitude towards sport. *Jap. J. Psychol.*, 1934, 9, 953-977.—It was found that "there is no important relation between age and attitude toward sport. But sectionally examined we ascertained that 17- to 18-year-old students have a rather more negative attitude than 13- to 14-year-old ones."—R. Kuroda (Keijo).

3497. Ojemann, R. H. Generalizations relating to child development involved in intelligent parental guidance. *Univ. Ia Stud. Child Welf.*, 1934, 10, 29-99.—Also Appendix I, basic data for generalizations relating to child development, 269-341. A list of 319 generalizations relating to eleven phases of child development was built from the most refined data available. Judgments of the importance of the generalizations for the intelligent care and guidance of children were obtained for fathers and mothers separately. There were no differences in the importance of generalizations for mothers and fathers, with the possible exception of some which related more specifically to routines.—B. Wellman (Iowa).

3498. Ojemann, R. H. The measurement of attitude toward self-reliance. *Univ. Ia Stud. Child Welf.*, 1934, 10, 101-111.—Also Appendix II, tests for the measurement of attitude toward self-reliance, 343-356. Three scales were constructed for measuring

parental attitudes toward self-reliance. The mean scores of untrained parents fell on the unfavorable side of the scale. The mean score of fifteen highly trained judges was far to the favorable side of the scale. The needs of the parents may be represented by the difference between the two groups.—B. Wellman (Iowa).

3499. Osipova, V. N. [Inventive ability of children.] In *Obshchi i Tekhnicheski Krugozor Uchashevosa Sredni Shkoli*. Leningrad: GIZ, 1934. Pp. 92-108.—Environment, as a result of social requirements, serves as the material for creative and inventive tendencies in the young. Such activity and achievement is based on past experience of child inventors. These types of children display a marked interest in mechanics, chemistry, physics, drawing, and mathematics. The author recommends activity programs in a series of clubs, libraries, shops, etc., as a means of promoting inventive activity in school children.—L. S. Maeth (New York City).

3500. Prudnikov, N. G., & Rivin, J. S. [Technical construction thinking of child inventors.] In *Obshchi i Tekhnicheski Krugozor Uchashevosa Sredni Shkoli*. Leningrad: GIZ, 1934. Pp. 125-158.—The child invents during imitative play activity. The test process should include mechanical construction problems. The authors used Kushnikov's adaptation of mechanical toys standardized for testing purposes. Every subject had to make a working drawing of his solution. The investigations showed that some of the children showed a systematic planning tendency, others carried their work through by sheer imitation based on resemblance, while a great many showed considerable lack of mechanical ability.—L. S. Maeth (New York City).

3501. Rosenfeld, F. S., Shirman, A. L., Jukovskaya, Z. M., & Volotkina, M. A. [General and technical scope.] In *Obshchi i Tekhnicheski Krugozor Uchashevosa Sredni Shkoli*. Leningrad: GIZ, 1934. Pp. 10-45.—The aim of the study was to investigate the scope of adjustment in school activity as a result of systematic polytechnical methods of education. A series of questionnaires made up the major part of the survey. The children were under the direct observation of a group of trained pedologists, while at work, play, and other school as well as home activities. The authors arrive at the conclusion that the social influence factor due to organized pedagogical environment is of much greater significance than either the chronological or mental age factor.—L. S. Maeth (New York City).

3502. Schachter, M. Le comportement neuro-psychique du nourrisson. (The neuropsychic behavior of the infant.) *Rev. méd. Est*, 1932, 60, 808-819.—There is a discussion of the infant's reaction to certain stimuli: slapping of the buttocks, cutaneous stimulation of the cheek, touching of the sole of the foot while the subject is flat on the stomach, etc. There is also an enumeration of the time of appearance or duration of certain kinds of behavior: the gripping, prehension and scratching reflex; eye coordination, smiling, attention.—(Courtesy *Année psychol.*)

3503. Schilder, P., & Wechsler, D. Was weiss das Kind vom Körperinneren? (What does the child know about the inside of the body?) *Int. Z. Psychoanal.*, 1934, 20, 93-97.—The importance of this problem for psychoanalysis, especially for the theories of Melanie Klein, is discussed, and an interview study of 40 children, ranging in age from 4 to 13 years, is reported. A variety of answers was given, but with some consistency the younger children described the contents of the body as food and a few of them identified the inside of the body with the self. The difficulty of getting straightforward replies to questions about such forbidden matters as sex is pointed out.—S. Rosenzweig (Worcester State Hospital).

3504. Smythe, J. El problema del menor en estado de peligro. Conclusión. (The problem of the delinquent minor. Conclusion.) *Rev. Criminol., B. Aires*, 1934, 21, 631-664.—A final plea for a scientific orientation in the prevention and treatment of social maladaptation in children.—R. M. Bellows (Ohio State).

3505. Talankina, A. A. Obschi i tekhnicheski krugosor uchashchevosa sredni shkoli. (General and technical scope of secondary school children.) *Leningrad: GIZ*, 1934. Pp. 194.—Compiled from contributions (abstracted separately) by F. S. Rosenfeld, A. L. Shirman, Z. M. Jukovskaya, M. A. Volotkina, R. I. Cheranovskaya, M. V. Lange, L. U. Bogomaz, R. A. Kanicheva, L. I. Sergeev, V. N. Osipova, I. K. Zuzin, N. G. Prudnikov, J. S. Rivin, V. I. Kaufman, and B. G. Anan'ev of the Bekhterev Institute for the Study of the Brain. In this survey an attempt is made to solve the gap between gnostic and practical intelligence. The authors point out that the differentiation between verbal and motor impulses found in school children is due not so much to inherent tendencies as to defects in teaching and in the educational system. Particular attention is paid to the results obtained from encouraging inventive tendencies in manual training classes of the Leningrad schools. They point out that the integral mental outlook of school children is insufficiently influenced by the regular school activities and study of social construction.—L. S. Maeth (New York City).

3506. Todd, T. W. The progress of physical maturity and mental expansion in childhood. *Proc. Ass. Res. nerv. ment. Dis.*, 1934, 14, 55-65.—The determination of physical maturity by means of

roentgenographic measures of skeletal development is an essential feature in the analysis of growth. "It does not provide a measure for direct correlation with the progress of mental expansion, but it throws new light upon the responses of the growing child to his environment and gives information of significant value in the analysis of handicaps which may result from advancement in progress just as surely as from retardation."—D. G. Marquis (Yale).

3507. Wagoner, L. C. Observation of young children. New York: McGraw-Hill, 1935. \$2.00.—A brief discussion of nursery-school aims and methods of work precedes the series of laboratory observations to be made by beginning students. The 96 sets of suggested observations "are expected to help the students see more clearly the ways in which little children develop and to understand the adaptation of training to the particular needs and capacities of each child." A collection of reading references by topics is included in the manual.—R. Goldman (Clark).

3508. Weiss, L. A. Differential reactions of newborn infants to different degrees of light intensity. *Proc. Ia Acad. Sci.*, 1933, 40, 198-199.—90 infants under ten days of age were studied under three intensities of light, minimal, dim and moderate, during a five to six minute period. Activity was greatest under minimal light and least under moderate light. The effect of the stimulus was not maximal until the third to fourth minute.—B. Wellman (Iowa).

3509. Zuzin, I. K. [Experimental testing of technical ability of child inventors.] In *Obshchi i Tekhnicheski Krugosor Uchashchevosa Sredni Shkoli*. *Leningrad: GIZ*, 1934. Pp. 109-124.—The technical creative ability of an individual is a manifold process which is very complex, and is accompanied by a large attention span. Certain case studies show greater tendencies to preliminary planning, while others work by means of the trial-error method. There is a marked tendency to reproduce objects met with in the child's experience. Methods of technical training are based on visual-tactile, apperceptive, and concrete empirical processes.—L. S. Maeth (New York City).

[See also abstracts 3260, 3262, 3263, 3264, 3265, 3267, 3272, 3283, 3284, 3291, 3295, 3304, 3329, 3344, 3346, 3382, 3420, 3446.]

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